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Test Booklet Series

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TEST-29

TEST BOOKLET

GENERAL STUDIES (P) 2022 – Test – 3498

Time Allowed: Two Hours **Maximum Marks: 200**

INSTRUCTIONS

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS BOOKLET DOES **NOT** HAVE ANY UNPRINTED OR TURN OR MISSING PAGES OR ITEMS, ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.

2. ENCODE CLEARLY THE TEST BOOKLET SERIES **A, B, C** OR **D** AS THE CASE MAY BE IN THE APPROPRIATE PLACE IN THE ANSWER SHEET.

3. You have to enter your Roll Number on the Test Booklet in the Box provided alongside. **Do NOT** write anything else on the Test Booklet.

4. This Test Booklet contains **100** items (Questions). Each item is printed in **English.** Each item comprises four responses (answers). You will select the response which you want to mark on the Answer Sheet. In case you feel that there is more than one correct response with you consider the best. In any case, choose **ONLY ONE** response for each item.

5. You have to mark all your responses ONLY on the separate Answer Sheet provided. See direction in the answers sheet.

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6. All items carry equal marks. Attempt all items. Your total marks will depend only on the number of **correct responses** marked by you in the answer sheet. For **every incorrect** response **1/3rd of the allotted marks** will be deducted.

7. Before you proceed to mark in the Answer sheet the response to various items in the Test booklet, you have to fill in some particulars in the answer sheets as per instruction sent to you with your Admission Certificate.

8. After you have completed filling in all responses on the answer sheet and the examination has concluded, you should hand over to Invigilator only the answer sheet. You are permitted to take away with you the Test Booklet.

9. Sheet for rough work are appended in the Test Booklet at the end.

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1. With reference to demand-side components of GDP during 2021-22, consider the following statements:

1. The growth in consumption is mainly driven by government consumption.
2. Investment to GDP ratio during 2021-22 is the lowest in the last seven years.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

2. Consider the following statements with reference to foreign investments:

1. In India, FII beyond 10% of the paid-up capital of a company is construed as Foreign Direct Investment (FDI).
2. FDI in the defense sector is allowed upto 74% through automatic route.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

3. Consider the following sub-sectors of agriculture:

1. Crops
2. Forestry and Logging
3. Livestock
4. Fishing and Aquaculture

Arrange the above-given sectors in the decreasing order their share in the total Agriculture GVA (at current prices) during FY 2019-20.

(a) 1-2-3-4
(b) 2-1-4-3
(c) 1-3-2-4
(d) 1-4-3-2

4. Which of the following factors could influence the retail selling price of petrol and diesel in India?

1. Fuel Excise Duty
2. Goods and Services Tax
3. Dollar exchange rate
4. Value Added Tax on fuel

Select the correct answer using the code given below.

(a) 1, 2 and 4 only
(b) 1, 3 and 4 only
(c) 2, 3 and 4 only
(d) 1 and 2 only

5. Which of the following are the key programs of International Atomic Energy Agency (IAEA)?

1. Program of Action for Cancer Therapy (PACT)
2. Rays of Hope
3. Zoonotic Disease Integrated Action (ZODIAC)
4. Peaceful use Initiative (PIU)

Select the correct answer using the code given below.

(a) 1, 2 and 3 only
(b) 2 and 4 only
(c) 1, 3 and 4 only
(d) 1, 2, 3 and 4

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6. With reference to the Liquified Petroleum Gas (LPG) and Kerosene price trend, consider the following statements:

1. Prices of LPG in the country are based on Saudi Contract Price (CP).
2. LPG subsidy is governed under the Direct Benefit Transfer for LPG consumers (DBTL) scheme.
3. Kerosene is distributed through Public Distribution System (PDS) and is sold at market price with zero central subsidy.

Which of the statements given above is/are correct?

(a) 1 and 2 only
(b) 2 only
(c) 3 only
(d) 1, 2 and 3

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7. Shrestha Yojana, recently in news is related to:
(a) development of rural and backward areas.
(b) socio-economic upliftment of Scheduled Castes.
(c) financial assistance to MSMEs.
(d) affordable housing for migrants.

8. With reference to the insurance sector in India, consider the following statements:
1. India's average is quite above the international average in terms of insurance penetration for non-life insurance.
2. The insurance density for both life and non-life insurance in India is lower than the global standards.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

9. Consider the following statements with respect to a recently conducted survey on 'Situation Assessment of Agricultural Households' referred to as Situation Assessment Survey (SAS), 2021:
1. It was conducted by the Ministry of Agriculture and Farmers' Welfare.
2. According to the SAS report, the average monthly income per agricultural household is more than 10,000 rupees.
3. As per the SAS report, more than 85% of farmers belong to the category of Small and Marginal farmers.
4. As per the SAS report, among all the sources of the monthly income of agriculture households, income from wages constitutes the highest share of the monthly income.

Which of the statements given above are correct?
(a) 1 and 4 only
(b) 2 and 3 only
(c) 1, 2 and 3 only
(d) 2, 3 and 4 only

10. Consider the following statements:
1. The average turnaround time (a measure of a port's efficiency) of Indian ports is more than 2 days.
2. More than 30% of India's EXIM trade is carried out by Indian fleet.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

11. Which of the following is ***not*** correct with reference to graphene?
(a) It is a multi-layer of carbon atoms that are tightly bound in an octagonal honeycomb lattice.
(b) The separate layers of graphene in graphite are held together by van der Waals forces.
(c) It is the best conductor of heat and electricity.
(d) It has high melting and boiling points.

12. The Sumis and Konyak tribes were recently seen in the news belong to
(a) Manipur
(b) Jharkhand
(c) Nagaland
(d) West Bengal

13. Minimum Support Price is announced for which of the following crops?
1. Maize
2. Jute
3. Sesamum
4. Ragi
5. Copra

Select the correct answer using the code given below.
(a) 1, 2 and 4 only
(b) 1, 3 and 4 only
(c) 2, 3 and 5 only
(d) 1, 2, 3, 4 and 5

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14. Consider the following statements about All India Survey on Domestic workers, 2021 which was recently in news:

1. It is the first ever all-India survey on domestic workers.
2. It includes include details of the both migrant and non migrant workers.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

15. Consider the following statements with respect to the Indian Economy:

1. India remained among the top ten services exporter countries in 2020.
2. Due to CoVID-19 services exports registered a higher decline in percentage points than merchandise exports.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

16. Which of the following is ***not*** correct with reference to India's external sector economy?

(a) India is the second largest foreign exchange reserves holder in the world.
(b) India's foreign exchange reserves are higher than the country's external debt.
(c) India's balance of payments remained in surplus throughout the last two years
(d) Foreign exchange reserves of India are equivalent to import cover of more than one year.

17. With reference to the performance of the banking sector in India, which one of the following statements is correct?

(a) The Gross Non-Performing advances (GNPA) ratio and Net Non-Preforming ratio of Scheduled Commercial Banks (SCBs) have continued to decline since 2018-19.
(b) The Gross Non-Performing advances (GNPA) ratio and Net Non-Preforming ratio of Scheduled Commercial Banks (SCBs) have continued to increase since 2018-19.
(c) The Gross Non-Performing advances (GNPA) ratio has continued to decline but Net Non-Preforming ratio of Scheduled Commercial Banks (SCBs) has continued to increase since 2018-19.
(d) The Gross Non-Performing Advances (GNPA) ratio and Net Non-Preforming ratio of Scheduled Commercial Banks (SCBs) has consistently increased since 2013-14.

18. With respect to tax proposals regarding virtual digital assets in the budget 2022-23, which one of the following statements is correct?

(a) Flat 30 percent tax will be levied on short term virtual digital assets capital gains only.
(b) Flat 30 percent tax will be levied on long term virtual digital assets capital gains only.
(c) The gifting of virtual digital assets has been exempted from tax.
(d) Losses incurred during virtual digital asset transaction cannot be set off against any other income.

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19. The C-PACE proposed in the budget 2022-23 aims to
(a) achieve 30% growth in manufacturing sector by 2030.
(b) implement an expedited corporate exit process in 2022-23 fiscal year.
(c) achieve growth in 20% telecom sector this fiscal year.
(d) make all the government records available digitally.

20. Recently the government announced to mark December 26 as Veer Bal Diwas in the memory of
(a) Atal Bihari Vajpayee
(b) Guru Gobind Singh's sons
(c) Jawaharlal Nehru
(d) Lala Lajpat Rai

21. PM DAKSH Yojana is a National Action Plan for skilling marginalized persons. It has been launched by which of the following ministries?
(a) Ministry of Social Justice and Empowerment
(b) Ministry of Skill Development and Entrepreneurship
(c) Ministry of Education
(d) Ministry of Finance

22. In the context of the Economic Survey 2021-22, consider the following statements:
1. In the last two years, less than 20 percent of the total Government (Centre and States taken together) expenditure has been spent on social services.
2. General Government expenditure on education is less than 2.5 % of GDP in 2020-21.
3. Between 2012-13 and 2019-20, the Pupil-Teacher ratio has increased at both the primary and secondary school levels.

Which of the statements given above are correct?
(a) 1 and 2 only
(b) 1 and 3 only
(c) 2 and 3 only
(d) None

23. Consider the following statements with respect to Network for Greening the Financial System (NGFS):
1. The members of this network are confined to the countries of Asia and Africa.
2. It aims at enhancing the role of the financial system to mobilize capital for green and low-carbon investments.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

24. Consider the following statements with respect to palm oil:
1. Among the imported oilseeds, the share of palm oil is more than 50%.
2. Every year, Union Government announces Minimum Support Price (MSP) for Palm Oil.
3. Compared to other oilseed crops, Palm oil produces more edible oil per hectare.

Which of the statements given above is/are ***not*** correct?
(a) 2 only
(b) 1 and 3 only
(c) 1 and 2 only
(d) 1 only

25. Consider the following statements:
1. The production of sugar has outstripped consumption every year in the last decade.
2. Sugar mills that buy sugarcane are mandated to purchase crops from farmers within their respective Cane Reservation Areas.
3. Under the National Policy on Biofuels, sugarcane juice can be used as a raw material for the production of biofuel.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 and 3 only
(c) 1 and 2 only
(d) 3 only

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26. Consider the following statements regarding the COVID vaccination strategy in India:

1. Only government hospitals were allowed to procure COVID-19 vaccines directly from manufacturers.
2. Whole Virion Inactivated Corona Virus Vaccine was developed and manufactured by Bharat Biotech International Limited.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

27. Which of the following is the limit of aggregate holding of equity shares by a foreign company in Pension Funds in India?

(a) 100 per cent
(b) 49 per cent
(c) 74 per cent
(d) It is completly prohibited

28. Consider the following statements regarding Research and Development in India:

1. India is ranked among the top 50 countries in the Global Innovation Index 2021.
2. The numbers of patents applications filed by multinational companies are more than that filed by Indian residents.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

29. Consider the following statements regarding recently proposed National Tele-Mental Health Programme in the Union Budget 2022-23:

1. It is a national tele-mental health programme for people of all ages.
2. It will include a network of tele-mental health centres of excellence with NIMHANS being the nodal centre.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

30. Consider the following statements with respect to chemical fertilizers in India:

1. It is mandatory for all the domestic producers of urea to produce only neem-coated urea.
2. The Syngas produced from the coal gasification process is used in urea manufacturing.
3. Potash derived from Molasses was brought under the Nutrient Based Subsidy scheme.

Which of the statements given above are correct?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

31. To tackle malnutrition in poor women and poor children, the union government has issued "uniform" norms for fortified rice. Consider the following statements about fortification:

1. It is the addition of micronutrients in the rice to improve its nutritional capacity.
2. It is decided to blend 10% fortified rice stocks with normal rice.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

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32. Consider the following statements:

1. The National Mission for Clean Ganga was constituted under the provisions of the Environment (Protection) Act, 1986.
2. River City Alliance which provides a platform for the exchange of information for the sustainable management of urban rivers was launched by the United Nations.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

33. Consider the following statements:

1. National Supercomputing Mission aims to connect national institutions with more than 70 supercomputers.
2. Performance of a supercomputer is commonly measured in million instructions per second.
3. Param Pravega is the fastest supercomputer in India which has been developed by C-DAC.

Which of the statements given above is/are correct?

(a) 1 and 3 only
(b) 2 and 3 only
(c) 1 only
(d) 1, 2 and 3

34. The RAMP programme proposed in the budget 2022-23 is related to:

(a) boosting competitiveness in the MSME sector.
(b) ensuring safety, security and dignity of women.
(c) empowering citizens to skill, reskill or upskill through on-line training.
(d) improving nutritional outcomes for children, pregnant women and lactating mothers.

35. Consider the following statements regarding the e-SHRAM portal:

1. It facilitates the delivery of social security schemes to the workers.
2. It ensures the portability of the social security and welfare benefits to the migrants.
3. All farmers are eligible for registration in the e-SHRAM portal.

Which of the statements given above is/are correct?

(a) 1 and 2 only
(b) 1 only
(c) 3 only
(d) 1 and 3 only

36. Consider the following statements with respect to Start-Ups in India:

1. The number of start-ups in the space sector has increased significantly in the last three years.
2. India ranked third in the world in terms of the number of start-ups after the US and China.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

37. Consider the following statements regarding the Geospatial Data in India:

1. Prior government approval is required for the production of all types of geospatial data.
2. LIDAR is the technology used for capturing geospatial data.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

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38. Wholesale agricultural marketing in India is undertaken by a network of markets set up under the provisions of

(a) Essential Commodities Act, 1955
(b) General Grading and Marking Rules, 1988
(c) State Agricultural Produce Marketing Committee Acts
(d) None of the above

39. Consider the following statements with reference to the production of foodgrains during 2019-21:

1. Area under the production of wheat is more than the area under the production of rice.
2. Area sown under foodgrains during the Kharif cycle was greater than the Rabi cycle.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

40. India is associated with which of the following international initiatives?

1. Lifestyle for Environment (LIFE) movement
2. The Green Grids Initiative - One Sun One World One Grid
3. Coalition for Disaster Resilient Infrastructure
4. Leadership Group for Industry Transition (LeadIT Group)

Select the correct answer using the code given below.

(a) 1 and 3 only
(b) 2, 3 and 4 only
(c) 1, 2 and 4 only
(d) 1, 2, 3 and 4

41. Consider the following statements regarding the recent population trend in India.

1. The average life expectancy in rural areas is higher than in urban areas.
2. Females have a higher average life expectancy than males.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

42. Which of the following regulatory actions were taken by Union Government with respect to Plastic Waste Management?

1. The Guidelines for Extended Producer Responsibility have been given legal force through Plastic Waste Management Amendment Rules, 2021.
2. Manufacture, sale, and use of single-use plastic is prohibited with effect from July 2022.
3. The Plastic Waste Management Rules, 2016 cast Extended Producer Responsibility on Producer, Importer as well as Brand Owner.

Select the correct answer using the code given below.

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

43. Which of the following best defines the PM e-Vidya program?

(a) It aims to acquaint the elderly citizens with the digital technologies.
(b) It unifies all efforts related to digital/online education to enable coherent multi-mode access to education.
(c) It is an initiative to boost digital literacy in North East India by unifying the efforts of IITs and NITs.
(d) It is a program that provides free laptops and mobile phones to children of the rural poor.

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44. With reference to integrated farming practices in India, consider the following statements:

1. Strip Cropping is generally practiced on small fields.
2. Soil mulching decreases water loss due to evaporation.
3. Under relay cropping the second crop is planted even before the first crop is harvested.

Which of the statements given above is/are correct?

(a) 2 and 3 only
(b) 1 and 3 only
(c) 3 only
(d) 2 only

45. Synthetic Biology is a field of science that involves redesigning organisms by engineering them to have new abilities. With the present state of development, it can effectively do which of the following?

1. Making green chemical
2. Producing biofuels
3. Increases efficiency in bioprocessing of pharmaceuticals

Select the correct answer using the code given below.

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

46. He was the founder of the Hindustan Republican Association. He founded a branch of the Anushilan Samiti in Patna in 1913. He was sentenced to life for his involvement in the Kakori conspiracy and was imprisoned at Cellular Jail where he wrote his book titled Bandi Jeevan. Recently his 80th death anniversary was observed.

Which of the following personalities is being described in the passage given above?

(a) Jogesh Chandra Chatterjee
(b) Aurbindo Ghosh
(c) Rash Behari Bose
(d) Sachindra Nath Sanyal

47. Consider the following statements with reference to Gross Enrolment Ratio (GER):

1. GER is defined as total enrolment as a percentage of the total population of the country.
2. Between 2013-14 and 2019-20, the gross enrolment ratio at the primary level of school has decreased.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

48. UN has declared 2023 as International Year of Millets. Which of the following statements regarding millets are correct?

1. India is the largest producer of millets in the world.
2. They are notified as nutri-cereals in India.
3. They have a high glycemic index.

Select the correct answer using the code given below:

(a) 1, 2 and 3
(b) 1 and 2 only
(c) 1 and 3 only
(d) 2 and 3 only

49. It is the second-largest fair in India, after the Kumbh Mela. It is celebrated by the Koya tribe. It is celebrated once in 2 years in the month of "Magha" (February) on the full moon day. It honors the fight of a mother and daughter, Goddesses Sammakka and Saralamma. Which of the following fair has been mentioned in the above passage?

(a) Medaram Jathara
(b) Attukal Ponga
(c) Byanjana Dwadashi
(d) Kenduli Mela

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50. Consider the following statements with reference to the management of the oil and gas industry in India:

1. All the refinery by-products of crude oil are outside the purview of GST.
2. Oil and Natural Gas Corporation (ONGC) was empowered to authorize entities to establish 'City Gas Distribution Networks'.
3. 'Lakshya Bharat Portal', recently launched by Union Government is aimed to facilitate the auction of crude oil and natural gas blocks.

Which of the statements given above are ***not*** correct?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

51. Consider the following statements in the context of budget estimates of 2022-23 regarding the capital expenditure:

1. The outlay for capital expenditure is greater than the outlay for effective capital expenditure in the budget estimates.
2. The outlay for capital expenditure proposed in the Budget estimates of 2022-23 has more than tripled the capital expenditure of 2019-20.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

52. Which one of the following has the highest share of expenditure allocation in the Budget estimates of 2022-23?

(a) Central Sector Schemes
(b) Centrally Sponsored Schemes
(c) Subsidies
(d) Defence

53. Consider the following statements:

1. Public Debt is defined as the debt contracted against the Public account of India.
2. Public Debt accounted for more than 75 percent of total liabilities of the Central Government during 2020-21.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

54. Consider the following statements with reference to irrigation in India:

1. More than 50% of the net irrigated area is irrigated through canal systems.
2. Micro Irrigation Fund (MIF) is administered by the Central Ground Water Board.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

55. Consider the following statements with reference to Crops Diversification Programme:

1. The program is being implemented as a pilot project in the drought-prone regions of Maharashtra.
2. It is a sub-scheme of Rashtriya Krishi Vikas Yojana.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

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56. Which one of the following statements is ***not*** correct with reference to recently launched Parvatmala scheme in the Union Budget 2022-23?

(a) The scheme aims to develop roadways in hilly areas.

(b) The scheme will be taken up on Public-private participation (PPP) mode.

(c) The Ministry of Road Transport and Highways (MORTH) is the nodal ministry for the implementation of the scheme.

(d) The scheme is being presently started in regions like Uttarakhand, Himachal Pradesh, Manipur, Jammu & Kashmir and the other North Eastern states.

57. Consider the following statements with reference to vulture bees:

1. These are tropical stingless bee species.
2. These bees are the only bees in the world that use food sources not produced by plants.

Which of the statements given above is/are correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

58. A comprehensive report titled Health Insurance for India's Missing Middle recently seen in the news is released by:

(a) NITI Aayog

(b) Department of Social Justice Empowerment

(c) Welthungerhilfe

(d) Food and Agricultural Organisation

59. With reference to the EOS-04 satellite, consider the following statements:

1. It has been launched from PSLV-C52.
2. It is a radar imaging satellite designed to provide high-quality images.
3. INSPIREsat-1 and INS-2B are two small co-passenger satellites launched with it.

Which of the statements given above is/are correct?

(a) 1 and 3 only

(b) 2 only

(c) 1 and 2 only

(d) 1, 2 and 3

60. Which of the following two states are the top two contributors to Gross State Value Added in the service sector?

(a) Kerala and Tamil Nadu

(b) Kerala and Telangana

(c) Karnataka and Andhra Pradesh

(d) Maharashtra and Karnataka

61. The following are some important sources of tax revenue for the Union Government in India :

1. Corporation tax
2. Customs
3. Union excise duties
4. Goods and Service tax

Arrange the aforesaid sources of revenue in descending order as per the Revised Estimates for 2021-22.

(a) 4-1-2-3

(b) 4-1-3-2

(c) 1-4-2-3

(d) 1-4-3-2

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62. Consider the following statements with respect to Information Technology-Business Process Management (IT-BPM) sector in India:

1. Europe and Asia-Pacific account for the highest IT-BPM export earnings of India.
2. Within the IT-BPM, Banking Financial Services and Insurance (BFSI) accounts for 41 percent of the exports.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

63. 'Istanbul Convention' which was recently in news, is related to the:

(a) Violence against women
(b) Cybersecurity
(c) Elimination of Racial discrimination
(d) Counter terrorism consensus

64. What is the objective of the CHAMPIONS portal, often seen in the news?

(a) To help redress grievances of Micro, Small, Medium Enterprises.
(b) To provide tools for effective management of schools.
(c) To provide facility to lodge grievances to the public authorities on any subject related to service delivery.
(d) To provide technological and financial assistance to sportspersons to improve their performance.

65. Consider the following statements regarding the India VIX Index:

1. It is based on the SENSEX Index Option prices.
2. It indicates the market's expectation of volatility in the near term that is the next 30 calendar days.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

66. Consider the following statements:

1. Every parcel of the land categorised under forest cover is a part of the recorded forest area.
2. India is the tenth largest country by forest area.
3. In its tax devolution formula, 15th Finance Commission kept the weightage of 'Forest and Ecology' at 10%.

Which of the statements given above are correct?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

67. Consider the following statements regarding the National Asset Reconstruction Company Limited (NARCL), and India Debt Resolution Company Limited (IDRCL):

1. The majority of the shares of both NARCL AND IDRCL will be owned by Public Sector Banks.
2. NARCL will aggregate and acquire the stressed assets and IDRCL, in turn, will provide stressed assets management and resolution services to NARCL on an exclusive basis.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

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68. With reference to India's external debt, consider the following statements:

1. The share of short-term debt in total external debt is more than 50 percent at the end-March 2021.
2. The foreign exchange reserves as a ratio to external debt crossed 100 percent after a decade in 2021.

Which of the statements given above is/are ***not*** correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

69. Consider the following statements regarding the findings of the fifth round of the Nation Family Health Survey NFHS (2019-21):

1. The Total Fertility Rate has declined from 2.2 to 2.0 at the national level.
2. Kerala and Chandigarh are the only two states with 100 percent institutional delivery.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

70. Consider the following statements regarding Mission Vatsalya:

1. It provides Child Protection Services and Child Welfare Services.
2. It has two sub-schemes 'Sambal' and 'Samarthya'.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

71. Arrange the following components in increasing order of their share in India's External Debt.

1. NRI deposits
2. Commercial borrowings
3. Short-term trade credit

Select the correct answer using the code given below.

(a) 2-3-1
(b) 3-1-2
(c) 3-2-1
(d) 1-3-2

72. With reference to the crumb rubber, consider the following statements:

1. It is recycled rubber produced by reducing scrap tires into uniform granules.
2. It is used in road construction.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

73. Deposit Insurance and Credit Guarantee Corporation has been established by which one of the following Acts?

(a) Deposit Insurance and Credit Guarantee Corporation Act, 1961
(b) Reserve Bank of India Act, 1934
(c) Banking Regulation Act, 1949
(d) Payment and Settlement Systems Act, 2007

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74. Union budget 2022-23 has proposed four pilot projects for coal gasification. Which of the following statements is/are correct regarding coal gasification?

1. It is a process to convert coal into a fuel gas in the absence of oxygen.
2. It is considered a cleaner option as compared to the burning of coal.
3. It will help in achieving a methanol-based economy in India.

Select the correct answer using the code given below.

(a) 3 only
(b) 1 and 2 only
(c) 2 and 3 only
(d) 1, 2 and 3

75. With reference to the Factoring Regulation (Amendment) Act, 2021, consider the following statements:

1. It was enacted in line with the recommendations of the U.K. Sinha Committee.
2. Only those NBFCs which do factoring as "principal business" will be eligible to do factoring business.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

76. With reference to India's trade in services during FY 2020-21, consider the following statements:

1. India has net surplus trade in Services during the period.
2. Exports of business services continue to be the largest exported service during FY 2020-21.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

77. Consider the following statements regarding the PM-DevINE scheme proposed in the budget 2022-23:

1. It aims at funding infrastructure and need-based social development in the aspirational districts of the country.
2. It will be implemented by NITI Aayog.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

78. Which of the following sectors attracted the highest FDI Equity Inflows in India during the FY 2020-21?

(a) Pharmaceuticals
(b) Computer software & hardware
(c) Telecommunications
(d) Automobile industry

79. Consider the following statements regarding the Aatmanirbhar Skilled Employees Employer Mapping (ASEEM) Portal:

1. It is a database of the skilled workforce of the country, created to match the supply of skilled workforce with the market demand.
2. It is developed and managed by National Skill Development Corporation.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

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80. Retail Inflation in India is measured by which one of the following?

(a) Consumer Price Index-Combined (CPI-C) inflation.

(b) Consumer Price Index-Industrial Workers (CPI-IW) inflation.

(c) Consumer Price Index for Agricultural Labourer (CPI-AL) inflation.

(d) Consumer Price Index-Urban (CPI-U) inflation.

81. Consider the following statements about Information Fusion Centre for Indian Ocean Region (IFC-IOR):

1. It was established by the Indian Navy to keep track of shipping traffic.
2. Its headquarters is situated in India.
3. It provides information related to the weather forecasts and warnings.

Which of the statements given above is/are correct?

(a) 1 only

(b) 1 and 2 only

(c) 2 and 3 only

(d) 1, 2 and 3

82. What is common between Parbati Giri and Tileshwari Baruah?

(a) They are women freedom fighters during Indian national movement.

(b) They are women bhakti saints from eastern India and north-east India.

(c) They are women Nobel Prize winners.

(d) They are famous mountaineers who climbed Mt. Everest.

83. Union Government in the Budget 2022-23 has proposed introduction of Digital Rupee by the Reserve Bank of India. Which of the following statements is/are ***not*** correct regarding the Digital Rupee?

1. It is the same as a fiat currency.
2. It will lead to cheaper currency management system.
3. It will appear as an asset on a central bank's balance sheet.

Select the correct answer using the code given below.

(a) 3 only

(b) 1 and 2 only

(c) 1 and 3 only

(d) None

84. Recently Union Government launched the app 'FARMS' with the objective of

(a) providing information regarding the organic farming

(b) making farmers aware of the current price trends of various crops in the market

(c) helping the farmers in getting rented farm machinery through Custom Hiring Centers

(d) providing knowledge of government schemes related to agriculture

85. Consider the following statements regarding vocational skills development in India:

1. As per the Periodic Labour Force Survey 2019-20 formal vocational training among the working population has improved 2019-20 over 2018-19.
2. National Education Policy 2020 targets at least 50 percent of school learners to get exposure to vocational education by 2025.

Which of the statements given above is/are correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

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86. Consider the following statements regarding Gujarat International Finance Tech (GIFT) city:

1. It is India's first International Financial Services Centre (IFSC) set up under the Special Economic Zone Act, 2005.
2. Foreign universities are not allowed to offer courses in the GIFT-City.
3. Income received from portfolio management services by the Offshore Banking Unit is exempted from tax in GIFT-city.

Which of the statements given above are correct?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

87. Which among the following accounts for the largest share in Central Government's Revenue Expenditure in 2020-21?

(a) Salaries (pay & allowances)
(b) Interest payment
(c) Defence Services
(d) Major subsidies

88. Consider the following statements with reference to the debt position of the Central Government:

1. Total liabilities of the Central Government, as a ratio of GDP have risen sharply in 2020-21.
2. Non-marketable Securities constitute more than 90 percent of internal debt.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

89. Consider the following statements regarding the Indian economy:

1. The Worker Population ratio is defined as the percentage of employed persons in the population.
2. There is a decrease in the formalization of the job market over the last few years.
3. The Unemployment Rate is defined as the percentage of unemployed persons in the labor force.
4. There is a decline in the workforce engaged in agriculture over the last two years.

Which of the statement given above are correct?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1 and 4 only

90. Consider the following statements with reference to the perovskite-based solar cells:

1. Perovskite materials are widely used semiconductor materials as they are affordable.
2. Perovskite-based solar cells can be manufactured at room temperature.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

91. Factoring is an important source of liquidity worldwide in this context which of the following best defines the term Factoring?

(a) It is the costs of the factors of production to produce a given product in an economy.
(b) It is a transaction where an entity sells its receivables to a third party for immediate funds.
(c) It is the running down or payment of a loan by instalments.
(d) It is buying an asset in one market and simultaneously selling an identical asset in another market at a higher price.

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92. With reference to the Atal Pension Yojana (APY), consider the following statements:

1. More than 50 per cent of its subscribers are between the ages of 18 and 25 years.
2. There are more female subscribers of the scheme than male subscribers.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

93. With reference to the Non-bank financial Company (NBFC) sector in India, consider the following statements:

1. The Credit growth from NBFC has been consistently decreasing year on year since 2013.
2. The Credit to GDP Ratio from NBFCs has increased between 2013 and 2021.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

94. Consider the following statements regarding the vibrant villages programme proposed in the budget 2022-23:

1. It aims to boost infrastructure in Indian villages along the border with all the neighbouring countries of India.
2. Villages will be provided with the direct-to-home access for Doordarshan and educational channels under the programme.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

95. Which of the following statements are correct regarding the employment trend in the Indian Economy?

1. About 65 percent of the additional workers joined in 2019-20 were self-employed.
2. Employment creation in rural areas is higher than in urban areas from 2017 to 2019.
3. More people are employed in the construction sector than the agriculture sector in 2019-20.

Select the correct answer using the code given below.

(a) 1 and 2 only
(b) 1, 2 and 3
(c) 2 and 3 only
(d) 1 and 3 only

96. Which of the following are the major Agricultural export commodities of India during the last two years?

1. Sugar
2. Pulses
3. Vegetable Oils
4. Marine Products

Select the correct answer using the code given below.

(a) 1 and 3 only
(b) 2 and 4 only
(c) 2 and 3 only
(d) 1 and 4 only

97. Consider the following statements with respect to SDG India Index:

1. The greater the SDG India index the greater the distance to SDG target is achieved.
2. It was released by the NITI Aayog.
3. India overall score has steadily improved since its inception.

Which of the statements given above are correct?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

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98. The tern bridgmanite recently seen in the news is

(a) most powerful dynamite in the world.

(b) mineral commonly found between Earth's core and mantle.

(c) plastic clay containing not less than 85% clay mineral.

(d) a major mineral recently declared by the government.

99. Which of the following statements about Drone Rules, 2021 is ***not*** correct?

(a) No restriction on foreign ownership in Indian drone companies.

(b) Coverage of drones under the rules increased from 300 kg to 500 kg.

(c) No permission is required for operating drones in green zones.

(d) Remote pilot license required for micro drones for non-commercial use.

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100. Which one of the following is a newly added commodity in the list of top ten exported commodities during April-November, 2021?

(a) Iron and Steel

(b) Organic Chemicals

(c) Aluminium and its products

(d) Marine Products

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ANSWERS & EXPLANATIONS
GENERAL STUDIES (P) TEST – 3498 (2022)

Q 1.A

- Aggregate demand is a measurement of the total amount of demand for all finished goods and services produced in an economy.
- The equation for aggregate demand adds the amount of consumer spending, private investment, government spending, and the net of exports and imports. The formula is shown as follows:
  - AD = C + I + G + Nx
  - C=Consumer spending on goods and services
  - I=Private investment and corporate spending on non-final capital goods (factories, equipment, etc.)
  - G=Government spending on public goods and social services (infrastructure, medicare, etc.)
  - Nx=Net exports (exports minus imports)
- Latest advance estimates suggest full recovery of all components on the demand side in 2021-22 except for private consumption. **Total consumption is estimated to have grown by 7.0 percent in 2021-22 with government consumption remaining the biggest contributor as in the previous year.** Government consumption is estimated to grow by a strong 7.6 percent surpassing pre-pandemic levels. **Hence, statement 1 is correct.**
- Investment, as measured by Gross Fixed Capital Formation (GFCF) is expected to see strong growth of 15 percent in 2021-22 and achieve full recovery of pre-pandemic level. The government's policy thrust on quickening the virtuous cycle of growth via capex and infrastructure spending has **increased capital formation in the economy lifting the investment to GDP ratio to about 29.6 percent in 2021-22, the highest in seven years. Hence, statement 2 is not correct.**
- From a demand perspective, India's total exports are expected to grow by 16.5 percent in 2021-22 surpassing pre-pandemic levels. Imports also recovered strongly with the revival of domestic demand and a continuous rise in the price of imported crude and metals. Imports are expected to grow by 29.4 percent in 2021-22 surpassing corresponding pre-pandemic levels.

Q 2.C

- **Foreign Direct Investment (FDI)** is the investment through capital instruments by a person resident outside India
  - in an unlisted Indian company;
  - 10 percent or more of the post-issue paid-up equity capital on a fully diluted basis of a listed Indian company.
- **Foreign Portfolio Investment** is any investment made by a person resident outside India in capital instruments where such investment is
  - less than 10 percent of the post issue paid-up equity capital on a fully diluted basis of a listed Indian company
  - less than 10 percent of the paid-up value of each series of capital instruments of a listed Indian company.
- In India, a particular FII is allowed to invest up to 10% of the paid-up capital of a company, which implies that any **investment above 10% will be construed as FDI. Hence statement 1 is correct.**
- **FDI inflows in India stood at the US $ 45.14 billion in 2014-15 and have continuously increased since then.** During the year 2019-20, the FDI inflows to India stood at USD 74.39 billion. In 2018-19, it stood at USD 62 billion. In 2017-18, it was USD 60.97 billion and in 2016-17, the FDI inflow to India stood at USD 60.22 billion. India registered its highest-ever annual FDI inflow of US$ 81.97 billion (provisional) in 2020-21 reflecting a growth of 10 percent as compared to the previous year.

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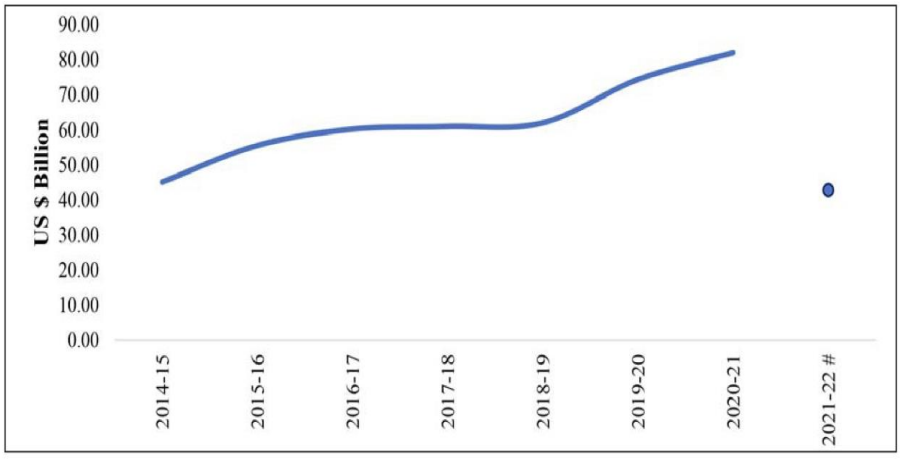
Figure 14: Total FDI Inflows



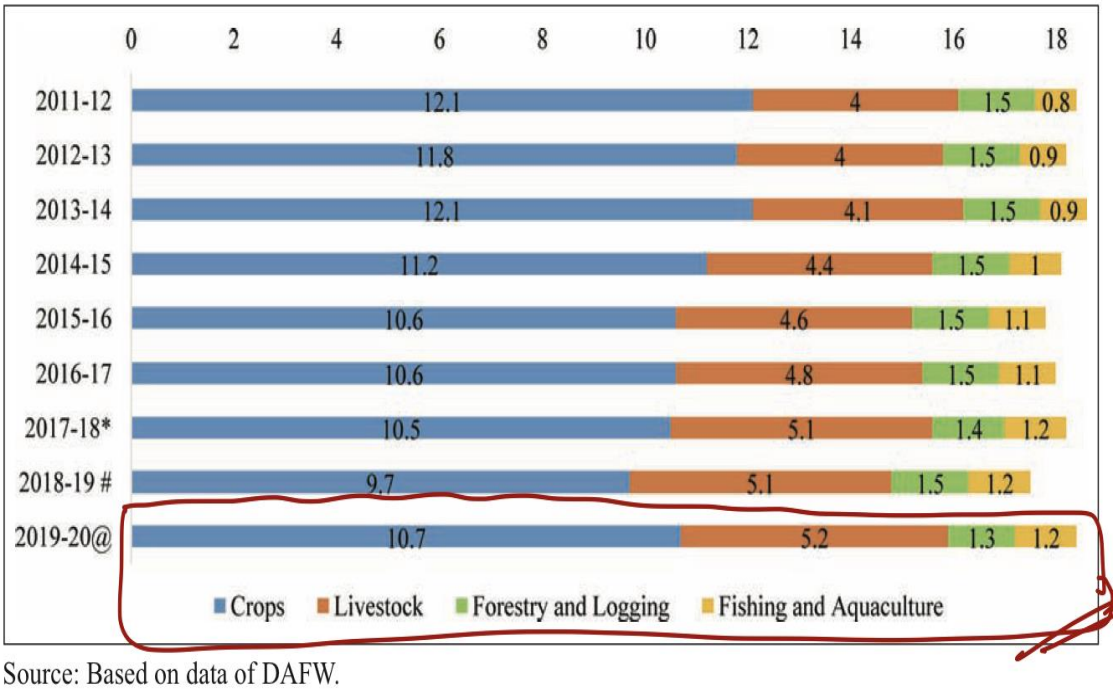
Source: Survey calculation based on data from DPIIT. #April to Sept 2021

- The FDI policy amendments have been carried out to realize the vision of an AtmaNirbhar Bharat. Now, **FDI in the defense sector is allowed up to 74 percent through automatic route** (from earlier 49percent) for companies seeking new industrial licenses. FDI beyond 74 percent and up to 100 percent will be permitted under the Government route. **Hence statement 2 is correct.**

Q 3.C

- The Agricultural Sector is divided into four main sub-sectors, namely:
  - Crops
  - Livestock
  - Fisheries and Aquaculture (including capture fisheries)
  - Forestry.

Figure 4: Percentage Share of GVA of Crop & Allied Sectors in Total Agriculture GVA (at current prices)



Source: Based on data of DAFW.

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- In the above-given diagram, the trend in the distribution of the share of GVA of agriculture among its constituents is presented for the last few years. From the above diagram, It can be seen that the share of the agriculture sub-sectors in total GVA (at current prices) of the economy -
  - **Crops - 10.7%,**
  - **Livestock - 5.2%,**
  - **Forestry and Logging - 1.3%,**
  - **Fishing and Aquaculture - 1.2%.**
- **Hence the correct order is 1-3-2-4. Hence option (c) is the correct answer.**

Q 4.B

- Retail Selling Price of petrol and diesel in the country are linked to the prices of crude. The crude prices have been falling this year. The crude prices have been increasing in the last few months. **Indian basket is moving upwards and reached beyond $ 84 per barrel in October 2021.**
- **The Dollar exchange rate was also on the upward trend and is hovering around 75 per USD which was also impacting the prices of Petrol and Diesel.**
- The central government taxes the production of petroleum products, while states tax their sale. **The central government levies excise duty on petrol and diesel.** In this background, Excise Duty on petrol and diesel was rationalized by Rs 5 per litre on Petrol and ` 10 per litre on Diesel to ease fuel prices in India.
- **States levy sales tax/ Value Added Tax (VAT) on petrol and diesel which varies across states.** Recently, many states and Union Territories have also reduced VAT on Petrol and Diesel to give relief to the consumers.
- Petrol and Diesel are out of the GST purview.
- **Hence, option (b) is the correct answer.**

Q 5.D

- **Recently, Iran has rejected deadline to revive the 2015 Iran nuclear deal also known as Joint Comprehensive Plan of Action (JCPOA)**. It is a landmark accord signed between Iran and a coalition of world powers including the US, the UK, China, Russia, France, and Germany (collectively known as P5+1). It also allows inspections from the **International Atomic Energy Agency (IAEA)** to access nuclear sites of Iran to ensure that it would not be able to develop nuclear weapons in secret.
- **The International Atomic Energy Agency (IAEA) is the world's central intergovernmental forum for scientific and technical co-operation in the nuclear field.** It works for the safe, secure and peaceful uses of nuclear science and technology, contributing to international peace and security and the United Nations' Sustainable Development Goals. was created in 1957 in response to the deep fears and expectations generated by the discoveries and diverse uses of nuclear technology. **The Agency's genesis was U.S. President Eisenhower's "Atoms for Peace" address to the General Assembly of the United Nations on 8 December 1953.**
- Reflecting the growing importance of a number of key sectors in the nuclear field, the IAEA has created several specialised programmes. These focus on cancer therapy, nuclear safety and security, and innovative nuclear reactors and fuel cycles, among others.
  - **Program of Action for Cancer Therapy (PACT):** Nuclear technology plays a key role in the diagnosis and treatment of cancer. Itprovides assistance in the area of cancer through imPACT Reviews, resource mobilization, and by supporting the development of strategic documents such as Comprehensive National Cancer Control Plans and bankable documents for fundraising. It also supports cancer-related IAEA activities that are delivered through technical cooperation, human health and other programmes. It was established with the goal of ensuring the integration of radiotherapy in comprehensive cancer control and of engaging with other international organizations such as the World Health Organization (WHO) to address cancer control in a comprehensive way.
  - **Rays of Hope:** It is based on sustainability, build or strengthen radiation safety legislation and infrastructure and provide quality control, guidance, training and equipment for the treatment of cancer. It combines several elements into a set of interventions that build on and complement each other in order to maximize impact.
- **Zoonotic Disease Integrated Action (ZODIAC):** It was established in June 2020 to help countries prevent pandemics caused by bacteria, parasites, fungi or viruses that originate in animals and can be transmitted to humans. Using a systematic and integrated approach, ZODIAC will strengthen the preparedness and capabilities of Member States to rapidly detect and timely respond to outbreaks of such diseases.

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- **The Peaceful Uses Initiative (PUI):** It was launched in 2010 and has become instrumental in mobilizing extrabudgetary contributions which supplement the Technical Cooperation Fund to support technical cooperation projects and other unfunded projects of the IAEA in the areas of peaceful application of nuclear technology.
- **Hence option (d) is the correct answer.**

Q 6.D

- The prices of petroleum products in the country are linked to the price of respective products in the international market.
- **Prices of LPG in the country are based on Saudi Contract Price (CP), the benchmark for international prices of LPG. Hence statement 1 is correct.**
- **LPG subsidy is governed under Direct Benefit Transfer for LPG consumers (DBTL) scheme,** wherein the subsidy on domestic LPG is regulated based on direction of price trends in international market. **Hence statement 2 is correct.**
- Since May, 2020, there is no subsidy to the consumers on Domestic LPG (at Delhi Market). However, in far-flung areas and some other markets, there is some subsidy that varies from market to market mainly due to higher inland freight from port to bottling plant.
- Kerosene has traditionally been used to meet the lighting and cooking needs, especially in rural areas.
- Government has decided to phase out use of kerosene for cooking and lighting in view of the increasing coverage of electricity for lighting needs and LPG as a clean cooking fuel.
- **Kerosene is distributed through PDS and is sold at market price with zero central subsidy. Hence statement 3 is correct.**
- The allocation varies from State to State depending on factors like LPG penetration, non-lifting of PDS Kerosene, voluntary requests for surrender/reduction.
- State Government of Tamil Nadu is still subsidizing kerosene through state subsidy.

Q 7.B

- As part of the major commemoration of the 'Azadi Ka Amrit Mahotsav', the Government of India, along with the entire country , observed Mahaparinirvana Divas on 6th December, 2021 on the occasion of Dr. B. R. Ambedkar's 66th death anniversary.
- The Union Minister for Social Justice and Empowerment has launched the **'Shreshtha Yojana' to help in socio - economic upliftment and overall development of Scheduled Castes (SC)** students by providing quality residential education in reputed private schools .
- The Ministry has decided to provide assistance to 24800 meritorious students of Scheduled Castes with the help of about Rs.300 crores in next 5 years. The educationally backward districts and districts having SC community population at the national average are identified by NITI Aayog.
- **Hence option (b) is the correct answer.**

Q 8.B

- In India, insurance penetration was 2.71 per cent in 2001 and has steadily increased to 4.2 per cent in 2020.
- As of 2020, the penetration for life insurance in India is 3.2 per cent and nonlife insurance penetration is 1 per cent.
- **While India is at par with international average in terms of insurance penetration for life insurance, India is behind in terms of non-life insurance. Hence statement 1 is not correct.**
- Globally, insurance penetration was 3.3 per cent for the life segment and 4.1 per cent for the non-life segment in 2020.
- The insurance density in India increased from $11.5 in 2001 to $78 in 2020.
- **In 2020, idensity for Life insurance in India is $59 and Non-Life insurance is $19, much lower than global standards. Hence statement 2 is correct.**
- Globally, insurance density was $360 for the life segment and $449 for the non-life segment respectively in 2020.

Q 9.D

- **National Statistical Office (NSO)** in its 77th round of survey carried out a survey on **"Land and Livestock Holdings of Households and Situation Assessment of Agricultural Households" (SAS)** in the rural areas of India. households, they also reveal insights on their income and its sources. **Hence statement 1 is not correct**

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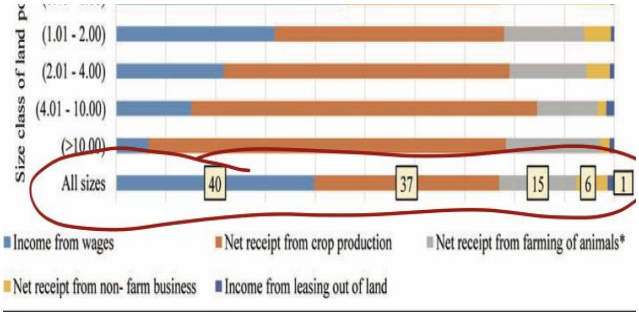
- The SAS, 2021 reveals that the **average monthly income per agricultural household**, as per the paid-out expenses approach, **works out to be ₹ 10218.** The average monthly income per agricultural household was ₹ 6426 as per the last SAS Report of 2014 estimated by the same approach. **Hence statement 2 is correct.**
- The SAS Report, 2021 also shows the class-wise distribution of sources of income among agricultural households.



- Hence **Income from wages constitutes the maximum portion** of the income of the agricultural household. **Hence statement 4 is correct.**
- According to the SAS report, the average size of household ownership holdings has declined from 0.725 hectares in 2003 to 0.592 hectares in 2013 and further to 0.512 hectares in 2019.
- **Distribution of Household by Size Category of Ownership Holding** is as follows:
  - **Small and Marginal Farmers (Below 2 ha) - 86%. Hence statement 3 is correct.**
  - Medium Farmers (2-10 ha) - 5.8%
  - Large farmers (>10 ha) - 0.1%

Q 10.A

- **Port performance in an economy** is crucial for trade competitiveness of that economy. The capacity of 13 major ports which was 871.52 million tonnes per annum (MTPA) at the end of March 2014, has increased by 79 percent to 1,560.61 MTPA by the end of March 2021. **The average turnround time at these major ports** has reduced from 62.11 hours in 2019-20 to **55.99 hours in 2020-21** due to the various measures taken by government to improve the ease of doing business. **Hence statement 1 is correct.**
- As on 31st December 2021, India had a fleet strength of 1463 vessels with Gross tonnage (GT) of 13,011 thousand. However, **Indian fleet is just 1.2 percent of world's fleet in terms of capacity and carries only 7.8 percent (for 2018-19) of India's EXIM trade.** With the cost of using services of foreign shipping company is less than that of a local shipping company, most freight moves in foreign ships leading to aa huge foreign exchange outflows. **Hence statement 2 is not correct.**

Q 11.A

- **Recent Context: The Kerala government announced the country's first Graphene Innovation Centre**, a joint venture of the Digital University of Kerala, Centre for Materials for Electronics Technology (C-MET), and Tata Steel Limited.
  - Graphene is **a single layer or monolayer of carbon atoms, tightly bound in a hexagonal honeycomb lattice. Hence option (a) is the correct answer**
  - It is an allotrope of carbon in the form of a plane of sp2-bonded atoms with a molecular bond length of 0.142 nanometres.
  - The separate **layers of graphene in graphite are held together by van der waals forces,** which can be overcome during the exfoliation of graphene from graphite.
- **Characteristics - Graphene is:**
  - The thinnest compound is known to man at one atom thick,
  - The lightest material is known (with 1 sq. M. weighing 0.77 mg),
  - The strongest compound discovered (due to the very strong covalent bonds),
  - The **best conductor of heat** at room temperature,
  - The **best conductor of electricity** known and
  - **High melting and boiling points.**

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Q 12.C

- **Sumi Nagas:** The wisdom of Sumi Nagas to use the ecological indicators to facilitate agricultural practices and predict seasonal variation is vanishing with time.
  - Sümi tribe is the major ethnic group among Nagas, who **are Indo-Mongoloid** tribal groups, in Nagaland, India.
  - Sümi Nagas **practiced Aki Kiti (a semi-contact combat sport),** and headhunting like other Nagas before their conversion to Christianity.
  - Festivals - Their **grandest festival, Tuluni,** is marked with feasts as the occasion occurs in the bountiful season of the year.
  - Ahuna is a traditional post-harvest festival of the Sumis.
  - Sumi Nagas is primarily agrarian and depends on forests for both food and livelihood. So several of the indicators facilitate agricultural practices and predict seasonal variation.
  - Sümi is one of the recognized scheduled tribes of India.
- **Konyak Tribes:** The Konyaks are the **largest of Naga tribes.** They are traditional hunters and warriors of Nagaland. The Konyaks were the last to give up the practice of **head-hunting** as late as the 1980s.
  - They are easily recognized by their tattooed faces. Their main occupation is agriculture.
  - They inhabit the area extending from Nagaland into Arunachal Pradesh, Myanmar as well.
  - They have institutions of learning like the morung of other Naga tribes.
  - **Society is mostly Christian now.**
  - Festivals - **Aoleng Manyu Festival** is the biggest festival in the Konyaks. It is celebrated in the first week of April to welcome spring.
  - '**Lao Ong Mo' Festival** is the traditional harvest festival celebrated in the months of August/ September.
  - **NOTE: Nagaland has 16 recognized tribes —** Angami, Ao, Chakhesang, Chang, Dimasa Kachari, Khiamniungan, Konyak, Kuki, Lotha, Phom, Pochury, Rengma, Sangtam, Sumi, Yimchungrü, and Zeliang. The Kachari and Kuki are non-Naga tribes while the Zeliang comprises two Naga communities — Zeme and Liangmai.
- **Hence option (c) is the correct answer.**

Q 13.D

- The Government's price policy for major agricultural commodities seeks to ensure remunerative prices to the growers for their produce with a view to encourage higher investment and production and thereby to safeguard the interest of consumers by making available supplies at reasonable prices.
- The Government **fixes the MSP of 23 mandated agricultural crops** on the basis of the recommendations of the **Commission for Agricultural Costs & Prices (CACP)** and after due consideration of the views of State Governments and the concerned Central Ministries/ Departments. The 22 mandated crops include 14 Kharif crops viz. paddy, jowar, bajra, **maize, ragi**, tur (arhar), moong, urad, groundnut, soybean (yellow), sunflower seed, **sesamum**, nigerseed, cotton and 6 Rabi crops viz. wheat, barley, gram, masur (lentil), rapeseed and mustard, **safflower** and 2 commercial crops viz. **jute and copra**. In addition to that, MSP for toria and de-husked coconut are also fixed on the basis of MSPs of rapeseed & mustard and copra respectively. **Hence option (d) is the correct answer.**
- While recommending MSPs, **CACP** considers important factors like **cost of production, overall demand-supply conditions, domestic and international prices,** inter-crop price parity, terms of trade between agricultural and non-agricultural sectors, the likely effect on the rest of the economy, besides ensuring rational utilization of land, water and other production resources and a **minimum of 50 percent as the margin over the cost of production.**
- **Hence option (d) is the correct answer.**

Q 14.C

- **Statement 1 is correct:** Recently, Labour and Employment Minister has flagged off the **first-ever All-India Survey on Domestic Workers**. It will provide the Household Estimates of Live-in/Live-out domestic workers and average number of domestic workers engaged by different types of households. the main objective are:
  - Estimate the number/proportion of DWs at National and State level
  - Household Estimates of Live-in/ Live-out DWs
  - Average number of DWs engaged by different types of households.
- **Statement 2 is correct:** It aimed to estimate the number and proportion of domestic workers at National and State level, percentage distribution of domestic workers with respect to Live-in/Live-out, formal/ Informal Employment, Migrant/Non-Migrant, their wages and other socio-economic characteristics.

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Q 15.A

- India has a dominant presence in global services exports. **It remained among the top ten services exporter countries in 2020**, with its share in world commercial **services exports increasing from 3.4 percent in 2019 to 4.1 percent in 2020. Hence statement 1 is correct.**
- The impact of Covid-19 induced global lockdown on India's services exports was less severe as compared to merchandise exports. **During 2020-21, India's goods exports (BoP basis) declined by 7.5 percent (YoY), while services exports declined by only 3.3 percent (YoY). Hence statement 2 is not correct.**

Q 16.A

- Despite all the disruptions caused by the global pandemic, India's balance of payments remained in surplus throughout the last two years.
- This allowed the Reserve Bank of India to keep accumulating foreign exchange reserves, which stands at US$634 billion on 31st December 2021). This is equivalent to 13.2 months of imports (Figure 28) and higher than the country's external debt.

Table 6: Comparison of Macroeconomic Indicators during Global Financial Crisis, Taper Tantrum and COVID-19

	Global Financial Crisis	Taper Tantrum	COVID-19 Pandemic	
Macroeconomic Indicators	2008-09	2012-13	2021-22	
CPI inflation	9.1	9.4	5.2	Apr-Dec 2021
India's Gross Fiscal Deficit as % of GDP	8.3	6.9	10.2	2021-22 (BE)
Fiscal Deficit of EMDEs (Asia) as % of GDP	1.6	1.7	7.8	2021
Current Account Balance as % of GDP	-2.3	-4.8	-0.2	Apr-Sept 2021
External Debt as % of GDP	20.7	22.4	20.2	June 2021
Forex Reserves (US$ billion)	252	292	634	31st Dec 2021
Govt Bond Yields 10-year	7.3	8.0	6.4	11th Jan 2022
Total FDI inflows (US$ billion)	8.3	34.0	48.4	Apr-Oct 2021
SCBs Capital to Risk Weighted Assets Ratio (CRAR)	13.2	13.9	16.5	Sept 2021
SCBs Provision Coverage Ratio	-	47.6	68.1	Sept 2021

Source: NSO, MoSPI, RBI, CGA, CDSL, Ministry of Finance, IMF.
Note: The taper tantrum happened in 2013. In the table above, 2012-13 is used to show the position just prior to taper tantrum as this is analogous to the present situation prior to withdrawal of liquidity in financial markets.

- **As of end-November 2021, India was the fourth-largest foreign exchange reserves holder in the world after China, Japan, and Switzerland.** A sizeable accretion in reserves led to an improvement in external vulnerability indicators such as foreign exchange reserves to total external debt, short-term debt to foreign exchange reserves, etc. **Hence, option (a) is not correct.**

Q 17.A

- **The Gross Non-Performing advances (GNPA) ratio (GNPAs as a percentage of Gross Advances) and Net Non-Preforming (NNPA) ratio of Scheduled Commercial Banks (SCBs) continued to decline since 2018-19. Hence option (a) is the correct answer.**
- GNPA ratio of SCBs decreased from 7.5 per cent at end-September 2020 to 6.9 per cent at end-September 2021.
- NNPA ratio of SCBs was 2.2 per cent at end-September 2021.

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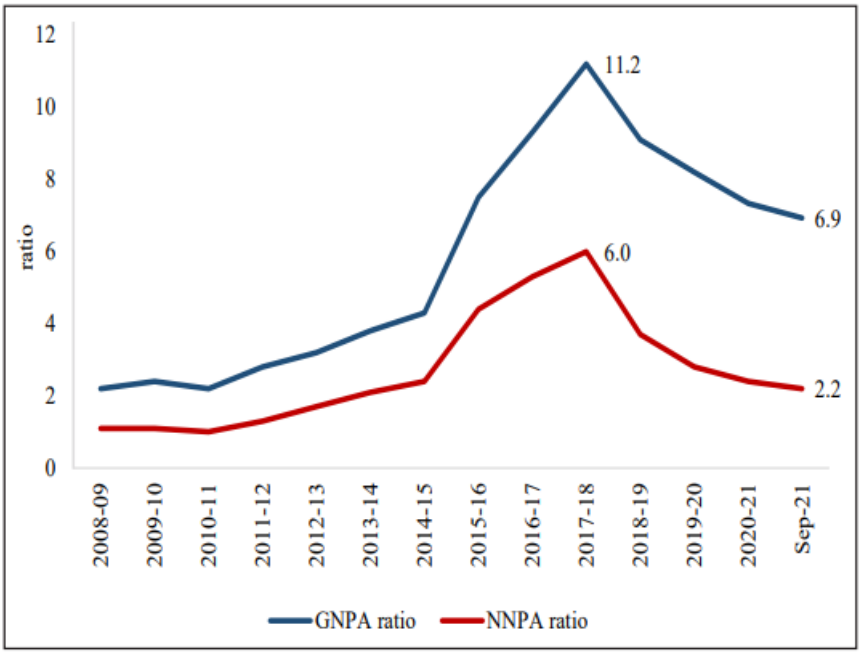
Figure 10: GNPA and NNPA ratio



Source: RBI
Note: Number for September 2021 is based on offsite returns data

Q 18.D

- Finance Minister in the Budget 2022-23 announced a **flat 30 percent tax on digital asset gains regardless of any long-term or short-term holding** by the investor. Further, TDS on payment made in relation to the transfer of virtual digital assets at 1 percent above a monetary threshold will also be levied. **Hence, both option (a) and option (b) are not correct.**
- The gifting of virtual digital assets has also been proposed to be taxed in the hands of the recipient. **Hence, option (c) is not correct.**
- Additionally, if a virtual digital asset investor incurs losses during the transaction, it can't be set off against any other income. **Hence, option (d) is correct.**

Q 19.B

- Finance Minister proposed the establishment of a **Centre for Processing Accelerated Corporate Exit (C-PACE)** in the Union Budget 2022-23. This will **implement an expedited corporate exit process in 2022-23 fiscal.**
- Several IT-based systems have been established for the accelerated registration of new companies. Now the Centre for Processing Accelerated Corporate Exit (C-PACE) with process re-engineering, will be established to facilitate and speed up the voluntary winding-up of these companies from the currently required two years to less than six months and **ensure ease of doing business in India.**
- **Hence option (b) is the correct answer.**

Q 20.B

- **PM Modi has announced the government decision to mark December 26 as Veer Bal Diwas in the memory of Guru Gobind Singh's sons. Hence option (b) is the correct answer.**
- **Who were the Sahibzades?**
  - Guru Gobind Singh ji had four sons – Sahibzada Ajit Singh, Sahibzada Jujhar Singh, Sahibzada Zorawar Singh and Sahibzada Fateh Singh.
  - All four of his sons were initiated into the Khalsa and all were executed by Mughal forces before the age of 19.
  - Sikhism honors the illustrious martyred sons of Guru Gobind Singh Ji in the prayer of ardas for their valor and sacrifice as 'Char Sahibzade', that is the four princes of the Khalsa warrior order.

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- **Significance of the day:**
  - The day marks when S**ahibzada Zorawar Singh and Sahibzada Fateh Singh attained martyrdom** when they were executed by the Mughals (1705).
  - The brothers were captured with **their grandmother Mata Gujari, the mother of Guru Gobind Singh.**
  - They were imprisoned with their grandmother and put to death by cruel Mughals on the orders of Aurangzeb, who attempted to suffocate them inside a brick enclosure.
  - At the time of martyrdom, the ages of Zorawar Singh and Fateh Singh were 9 years and 6 years respectively. This sacrifice is seen as the bravest sacrifice for Dharma by any young boy in Indian history.

Q 21.A

- PM-DAKSH (Pradhan Mantri Dakshta Aur Kushalta Sampann Hitgrahi) Yojana is a National Action Plan for skilling of marginalized persons covering SCs, OBCs, EBCs, DNTs, Sanitation workers including waste pickers.
- PM DAKSH Yojana was launched by the Ministry of Social Justice & Empowerment in 2020-21.
- **Hence option (a) is the correct answer.**

Q 22.D

- **As per the Economic Survey, Social Services include**
  - **education,**
  - **sports,**
  - **art and culture;**
  - **medical and public health, family welfare;**
  - **water supply and sanitation;**
  - **housing; urban development; welfare of SCs, STs, and OBCs,**
  - **labor and labor welfare;**
  - **social security and welfare, nutrition, relief on account of natural calamities etc.**
- The government's spending on social services increased significantly during the pandemic. In 2021-22 (BE), During the last five years, social services accounted for about 25 percent of the total Government expenditure (Centre and States taken together). In 2021-22 (BE), it was 26.6 percent. **Hence statement 1 is not correct.**
- The National Health Policy, 2017 envisaged the government's health expenditure to be 2.5 percent of GDP by 2025. With this objective government budget expenditure on the health, sector reached 2.1 percent of GDP in 2021-22, against 1.3 percent in 2019-20**.**
- In the years 2020-21 (RE) and in 2021-22 (BE) the expenditure by the general government (both center and state) on education is 3.1 % of GDP. **Hence statement 2 is not correct.**
- Pupil-Teacher Ratio, **an indicator whose decrease signals improvement in quality of education,** has improved at all levels continuously from 2012-13 to 2019-20: from 34 to 26 at primary, 23 to 18 at upper primary, 30 to 18 at secondary, and 39 to 26 at the higher secondary level. **Hence statement 3 is not correct.**
  - The improvement in the number of schools, teachers' availability, and facilities in schools is expected to help improve enrolment and reduce dropout rates.

Q 23.B

- At the **Paris "One Planet Summit" in December 2017, eight central banks and supervisors established the Network of Central Banks and Supervisors for Greening the Financial System (NGFS).** Since then, the membership of the Network has grown dramatically, across the five continents. **Hence statement 1 is not correct.**
- The **Network's purpose is** to help strengthen the global response required to meet the goals of the Paris agreement and **to enhance the role of the financial system to manage risks and to mobilize capital for green and low-carbon investments in the broader context of environmentally sustainable development.** To this end, the Network defines and promotes best practices to be implemented within and outside of the Membership of the NGFS and conducts or commissions analytical work on green finance. **Hence statement 2 is correct.**

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- India is actively contributing to the global efforts towards green finance. **Reserve Bank of India joined the Central Banks and Supervisors Network for Greening the Financial System (NGFS) as a member in April, 2021** and has begun participating in the workstreams of the NGFS. Recently, RBI published a 'Statement of Commitment to Support Greening India's Financial System - NGFS' and committed to exploring how climate scenario exercises can be used to identify vulnerabilities in RBI supervised entities' balance sheets, business models and gaps in their capabilities for measuring and managing climate-related financial risks.

Q 24.A

- **Oil palm** is grown for its oil which is used in cooking and in industry. Oil palm trees are unbranched with a long stout single stem, or trunk, terminating in a crown of 7–100 leaves. Oil palm is the richest source for vegetable oil production. **Oil palm produces 10 to 46 times more oil per hectare compared to other oilseed crops** and has a yield of around 4 tons oil per ha. **Hence statement 3 is correct.**
- During the year 2020-21, **India imported 133.5 lakh tonnes of edible oil, out of which the share of palm oil was around 56 %.** The National Mission on Edible Oils - Oil Palm (NMEO-OP) has been launched with the aim to augment the availability of edible oil in the country by harnessing area expansion, increasing crude palm oil production with the aim to reduce the import burden. **Hence statement 1 is correct.**
- Under the National Mission on Edible Oils - Oil Palm (NMEO-OP) scheme, Government will give price assurance to the oil palm farmers for the Fresh Fruit Bunches (FFBs). This will be known as the **Viability Price (VP)** which will protect the farmers from the fluctuations of the international crude palm oil (CPO) prices. MSP is not announced for Oil Palm. **Hence statement 2 is not correct.**

Q 25.B

- The significance of the sugarcane and sugar industry for India's economy can be gauged from the fact that it is the country's **second-largest agro-based industry**, next to cotton. It impacts the livelihood of over 5 crore farmers and their dependents. India is the **largest consumer and the second-largest producer of sugar in the world.**
- The average annual production of sugarcane is around 35.5 crore tonnes which is used to produce around 3 crore tonnes of sugar. The domestic consumption is estimated to be around 2.6 crore tonnes in 2020-21. Over the years, India has **become a sugar surplus nation** as reflected from the trend of sugar production and consumption in Figure 10. **Since 2010-11, production has outstripped consumption except in 2016-17. Hence statement 1 is not correct.**
- The interest of the sugarcane farmers is protected by **Fair and Remunerative Price (FRP)** which has doubled in a span of ten years. In addition, some state governments announce **State Advised Price (SAP)** at levels higher than FRP. Additionally, **sugar mills that buy sugarcane are mandated to purchase crops from farmers within a specified radius known as the Cane Reservation Area.** In this way, sugarcane farmers are insured and protected against price risk. **Hence statement 2 is correct.**
- Moreover, in order to handle the surplus production and enhance the liquidity of mills, the Government has taken various steps such as **incentivizing sugar mills to divert excess sugar cane/sugar to ethanol production,** providing financial assistance for transport to sugar mills to facilitate the export of sugar, etc.
    - **National Policy on Biofuels, 2018** expands the scope of raw material for ethanol production by **allowing the use of Sugarcane Juice,** Sugar containing materials like Sugar Beet, Sweet Sorghum, Starch containing materials like Corn, Cassava, Damaged food grains like wheat, broken rice, Rotten Potatoes, unfit for human consumption **for ethanol production. Hence statement 3 is correct.**

Q 26.B

- The Liberalized Pricing and Accelerated National COVID-19 Vaccination Strategy", was implemented from 1st May to 20th June 2021.
    - Under the strategy, States/Union Territories (UTs) and private hospitals were allowed to procure COVID-19 vaccines directly from manufacturers. **The government of India procured 50 percent of monthly vaccine production by the domestic manufacturers, while the State Governments and private hospitals procured the remaining 50 percent doses. Hence statement 1 is not correct.**
- India is among the few countries producing COVID vaccines. The country started with two Made in India COVID vaccines. India's first domestic COVID-19 vaccine, **Whole Virion Inactivated Corona Virus Vaccine (COVAXIN), was developed and manufactured by Bharat Biotech International Limited in collaboration with the National Institute of Virology of Indian Council of Medical Research (ICMR). Hence statement 2 is correct.**

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Q 27.C

- **In 2021 the foreign direct investment (FDI) limit in pension fund management was increased to 74% from 49% under the national pension system (NPS).**
- This will open doors for experienced foreign partners in this space and facilitate more competition in the segment.
- **Hence option (c) is the correct answer.**

Q 28.A

- The number of patents filed in India has gone up from 39,400 in 2010-11 to 58,502 in 2020-21.
- The number of patents application are increasingly coming from Indian residents rather than MNCs. The share of Indian residents in total applications has increased from 20 percent in 2010-11 to around 30 percent in 2016-17 and 40 percent in 2020-21. **But still majority of patent applications (60%) coming from MNCs). Hence statement 2 is not correct.**
- Consequently, I**ndia's ranking in Global Innovation Index** has climbed 35 ranks, from 81st in 2015-16 to **46th in 2021**. **Hence statement 1 is correct.**
- Reasons for low Intellectual Properties in India are:
  - Fewer patent examiners in India is another issue. In 2020, they were 615 patent examiners. In contrast, China, the US, and Japan had 13,704, 8,132, and 1,666 patent examiners respectively.
    - This leads to a huge delay in receiving First Examination Report, delaying the whole process.
  - Procedural delays and the complexity of filing patents have acted as deterrents.
    - Publishing the patent, which is the first step in the process, takes 18 months in India. In contrast, the US, China, South Korea, and Japan complete this in 15.4, 14.4, 11.1, 10.2 months, respectively.
    - India's low expenditure on Research and Development (R&D) activities. In 2020, the country spent 0.7 percent of its gross domestic product on R&D.

Q 29.C

- The government recognised the toll the ongoing Covid-19 pandemic has been taking on the mental health of a large section of the population and addressed it by **announcing the rollout of a national tele-mental health programme for people of all ages. Hence, statement 1 is correct.**
- This will include a **network of 23 tele-mental health centres of excellence with NIMHANS** (National Institute for Mental Health and Neurosciences) **being the nodal centre. International Institute of Information technology (IIIT-Bangalore) will provide technology support to the programme. Hence, statement 2 is correct.**

Q 30.D

- The government is making available fertilizers, namely Urea and 24 grades of P&K fertilizers to farmers at subsidized prices through fertilizer manufacturers/importers. **Urea is being provided to the farmers at a statutorily notified Maximum Retail Price (MRP).** As far as Phosphatic and Potassic (P&K) fertilizers are concerned, Government is implementing the Nutrient Based Subsidy (NBS) Scheme since 2010. Under the said scheme, the subsidy is provided on each grade of subsidized Phosphatic and Potassic (P&K) fertilizers depending upon their nutrient content.
- In order to tackle the import dependency and make the subsidy regime more efficient and transparent, the Government has taken several steps. For example, New Urea Policy-2015 has been notified with the objectives of maximizing indigenous production, promoting energy efficiency in production, and rationalizing subsidy burden on the government. The government **has made it mandatory for all the domestic producers of urea to produce only neem-coated urea. The government has brought Potash Derived from Molasses (PDM) under the Nutrient Based Subsidy (NBS) scheme** for the first time since its inception in 2010 to give a push to its manufacturing by Sugar Mills as a by-product and reduce its import dependence. **Hence statements 1 and 3 are correct.**
- **Coal gasification** is the process of converting coal into synthesis gas (also called **syngas**), which is a mixture of **hydrogen (H2), carbon monoxide (CO), and carbon dioxide (CO2).** The syngas can be used in a variety of applications such as in the production of electricity and making chemical products, such as fertilizers. In 2019, **Odisha's Talcher fertilizer plant** was awarded a contract for starting a coal gasification unit for the production of urea and Ammonia. In April 2021 the Cabinet Committee on Economic Affairs, chaired by Prime Minister has given its approval for the proposal of the Department of Fertilizers for the formulation of an **exclusive subsidy policy for Urea produced through the coal gasification route by Talcher Fertilizers Limited (TFL). Hence statement 2 is correct.**
- **Hence option (d) is the correct answer.**

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Q 31.A

- **Recently, Department of Food and Public Distribution (DFPD) under Ministry of Consumer Affairs, Food and Public Distribution for the first time issued uniform specifications for Fortified Rice Kernels (FRK) for grade A & Common Rice have in case of procurement of Fortified Rice Stocks, of which 1% of FRK (w/w) should be blended with normal rice stock.** The fortified rice is to be distributed under various government schemes, including the public distribution system (PDS) and midday meals in schools, by 2024. **Hence statement 2 is not correct.**
- The Food Safety and Standards Authority of India (FSSAI), which sets standards for food items in the country, **defines fortification as deliberately increasing the content of essential micronutrients in a food so as to improve the nutritional quality of food and to provide public health benefit with minimal risk to health. Hence statement 1 is correct.**
- Under conventional fortification nutrient levels in crops are increased through manual means during the processing of the crops. Whereas in the biofortification the nutritional quality of food crops is improved through agronomic practices, conventional plant breeding, or modern biotechnology.

Q 32.A

- **The Namami Gange Mission** aims to protect, conserve and rejuvenate the Ganga River Basin. In 2015, the Cabinet approved the Mission for a period of five years (2015-2020) with a budget outlay of 20,000 crores. Subsequently, on 7th October 2016, under the **Environment (Protection) Act, 1986,** the **National Mission for Clean Ganga (NMCG)** was notified as an authority under **Environment Protection Act,** which is also the nodal agency responsible for monitoring and implementing the Namami Gange Mission. **Hence statement 1 is correct.**
- In addition, the **Clean Ganga Fund (CGF)** was established in 2014 with the objective of contributing to the national effort of improving the cleanliness of the river Ganga with the contributions received from the public.
- To ensure Aviral Flow (Continuous Flow) of the Ganga, a **historical ecological flow notification mandating the minimum flow of river Ganga was released in 2016,** recognizing the right of the river over its own water.
- **River Cities Alliance,** a dedicated platform for river cities in India to ideate, discuss, and exchange information for sustainable management of urban rivers, here today. This is the first of its kind Alliance in the world symbolizes the successful partnership of the two Ministries i.e., **Ministry of Jal Shakti and Ministry of Housing and Urban Affairs.** The Alliance will focus on three broad themes- Networking, Capacity Building, and Technical Support. The Secretariat of the Alliance will be set up at National Institute for Urban Affairs (NIUA), with **NMCG's support. Hence statement 2 is not correct.**

Q 33.C

- **Recent Context: The Indian Institute of Science (IISc) has installed and commissioned Param Pravega, one of the most powerful supercomputers in India.**
  - It is the largest supercomputer in an Indian academic institution.
  - It was installed and commissioned under the National Supercomputing Mission (NSM).
  - The system is expected to power diverse research and educational pursuits.
  - It has a supercomputing capacity of 3.3 petaflops (1 petaflop equals a quadrillion or 1015 operations per second).
  - It has been **designed by the Centre for Development of Advanced Computing (C-DAC).**
  - **Param Pravega comparison with other supercomputers**
- **India's PARAM Siddhi, 63rd on the top 500 list, has met several performance benchmarks, including 4.6 petaflops sustained double precision, 6.5 petaflops of peak double-precision, and overall 210 AI petaflops**. It was built on NVIDIA DGX SuperPOD reference architecture networking and C-DAC's indigenously developed HPC-AI engine. The DGX SuperPOD reference architecture is known for providing blueprints for assembling world-class infrastructures and powerful supercomputers. **Hence, statement 3 is not correct.**
- Weather forecasting supercomputer Pratyush at the Indian Institute of Tropical Meteorology ranked 78th on the November edition of the list. Along with Pratyush, Mihir, another supercomputer noted on the list, is a 2.8 Petaflop machine. Together, Pratyush and Mihir consist of several computers that can deliver a peak power of 6.8 PetaFlops, making them the first multi-PetaFlops supercomputer ever built in India.
- The world's fastest supercomputer, Fugaku, reported an initial performance of Rmax of 416 petaFLOPS in the FP64 high-performance LINPACK benchmark. However, after last year's upgrade, Fugaku's performance increased to a Rmax of 442 petaFLOPS.

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- **About the National Supercomputing Mission (NSM):**
  - NSM was announced in 2015, with an **aim to connect national academic and R&D institutions with a grid of more than 70 high-performance computing facilities at an estimated cost of Rs. 4,500 crores** over the period of seven years **by 2022. Hence, statement 1 is correct.**
  - It supports the government's vision of 'Digital India' and 'Make in India'.
  - Implementation: NSM is jointly steered by the Ministry of Electronics and IT (MeitY) and Department of Science and Technology (DST - Ministry of Science and Technology) and implemented by the Centre for Development of Advanced Computing (C-DAC), Pune, and the Indian Institute of Science (IISc), Bengaluru.
- **Peta Flops**
  - The **performance of a supercomputer is commonly measured in floating-point operations per second (FLOPS) instead of million instructions per second (MIPS). Hence, statement 2 is not correct.**
  - In computing, floating-point operations per second (FLOPS, flops, or flop/s) is a measure of computer performance, useful in fields of scientific computations that require floating-point calculations.
  - For such cases, it is a more accurate measure than measuring instructions per second.

Q 34.A

- ·In a bid to make the MSME sector more competitive, the Government of India (GOI) will be rolling out the Raising and Accelerating MSME Performance (RAMP) programme with an outlay of ₹6,000 crores over five years. **Hence, option (a) is the correct answer.**
- The rolling out of the RAMP programme will help address many of the burning issues of MSMEs like delays in payment and access to credit. It will infuse competitiveness and expand employment opportunities.

Q 35.A

- e-SHRAM portal has been launched to create a National Database of Unorganized Workers (UWs). One of the main objectives of this portal is to **facilitate the delivery of Social Security Schemes** to the workers. **Hence statement 1 is correct.**
  - This database is seeded with Aadhaar and for the age group between 16-59 years. It includes construction workers, migrant workers, gig workers, platform workers, agricultural workers, MGNREGA workers, etc.
- It ensures the **portability of the social security and welfare benefits** to the migrant and construction workers at their working places. It may also be used for providing assistance to the eligible workers during any National crisis like COVID-19 in the future. **Hence statement 2 is correct.**
- Any worker who is unorganized and **aged between 16-59**, is eligible to register on the eSHRAM portal.
- **Only agriculture laborers and landless farmers** are eligible for registration in the eSHRAM portal. Other farmers are not eligible. **Hence statement 3 is not correct.**
- **Hence option (a) is the correct answer.**

Q 36.C

- India had a record number of start-ups (44) that reach unicorn status (any startup with a valuation of over US$1 billion) in 2021.
  - It overtook the UK to emerge as the third highest country in the number of unicorns after the US and China which added 487 and 301 unicorns respectively in 2021. As of January 2022, India has 83 unicorns with a total valuation of US$ 277.77 billion. **Hence statement 2 is correct.**
- Trends in the number of start-ups engaged in the space sector also show the pace of growth of the space sector in India. Just in the last three years number of start-ups in the space the sector has increased from 11 in 2019 to 47 in 2021. **Hence statement 1 is correct.**
- Over the recent years, Delhi has replaced Bangalore as the start-up capital of India. Over 5,000 recognized start-ups were added in Delhi while 4,514 start-ups were added in Bangalore between April 2019 to December 2021.

Q 37.B

- Ministry of Science and Technology released new guidelines for the Geo-Spatial Sector in India, liberalizing the policies governing the acquisition and production of geospatial data.
- Geospatial data includes data about natural or man-made, physical or imaginary features weather above the ground or below, boundaries points of interest, natural phenomena, mobility data, weather patterns, etc.
  - Geospatial data is used to describe data about objects, events, or phenomena (man-made or natural) that have a location on the surface of the earth. At present, 80% of any data has a geospatial component.

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- Technology for capturing geospatial data includes **LIDAR,** Satellite-based remote sensing, mobile phone sensors, etc. **Hence statement 2 is correct.**
  - **LIDAR (Light Detection and Ranging)** is a remote sensing method used to examine the surface of the Earth. A lidar instrument consists of a laser, a scanner, and a specialized GPS receiver. Airplanes and helicopters are the most commonly used platforms for acquiring lidar data over broad areas.

- Only Indian companies or entities that store and display the data exclusively within the country will be allowed to undertake certain key activities: terrestrial mobile mapping, street view surveys, generating high-res maps or surveying India's territorial waters.
- There shall be no requirement for prior approval, security clearance, license, or any other restrictions on the collection, generation, preparation, etc. Self-certification will be used to; convey adherence to these guidelines. **Hence statement 1 is not correct.**

Q 38.C

- **Wholesale agricultural marketing** is undertaken by the network of 6946 regulated wholesale markets, set up under the provision of the respective **State Agricultural Produce Market Committee (APMC) Act. Hence option (c) is the correct answer.**
- **APMCs**, has been recognized as one of the eligible entities under the **Agriculture Infrastructure Fund (AIF)** to further strengthen the infrastructure in APMC mandis. All loans under the AIF have an interest subvention of 3 percent per annum up to a limit of ₹ 2 crores. This subvention is available for a maximum period of 7 years. APMCs are eligible for multiple projects (of different infrastructure types) within their designated market area. In such cases, interest subvention for a loan up to ₹ 2 crores will be provided for each project of different infrastructure types e.g. cold storage, sorting, grading, and assaying units, silos, etc. within the designated market area of the APMC.
- Further, the Government of India launched **National Agriculture Market (e-NAM) Scheme in 2016** with the objective of **creating an online transparent competitive bidding system** to facilitate farmers with remunerative prices for their produce. Under the e-NAM Scheme, the Government is providing free software and assistance of **₹ 75 Lakh per APMC mandi** for related hardware including quality assaying equipment and creation of infrastructure like cleaning, grading, sorting, packaging and compost unit etc.

Q 39.B

- The agricultural sector was the least impacted by the pandemic-related disruptions. It is estimated to grow 3.9 percent in 2021-22 on top of 3.6 percent and 4.3 percent respectively in the previous two years. This sector now accounts for 18.8 percent of GVA.
- The share of Agriculture & Allied Sectors in Nominal GVA (percent) increased from 18.4 in 2019-20 to 20.2 in 2020-21 which later declined to 18.8 in 2021-22(1st AE).

Table 2: Share of Sectors in Nominal GVA (per cent)

Sectors	2019-20 (1st RE)	2020-21 (PE)	2021-22 (1st AE)
Agriculture & Allied Sectors	**18.4**	**20.2**	**18.8**
Industry	**26.7**	**25.9**	**28.2**
Mining & quarrying	1.9	1.6	2.3
Manufacturing	14.7	14.4	15.4
Electricity, gas, water supply & other utility services	2.6	2.7	2.5
Construction	7.4	7.2	8.0
Services	**55.0**	**53.9**	**53.0**
Trade, hotels, transport, communication and services related to broadcasting	18.9	16.4	16.9
Financial, real estate & professional services	21.2	22.1	20.9
Public administration, defence and Other Services	14.9	15.4	15.2
GVA at basic price	**100.0**	**100.0**	**100.0**

Source: NSO
Note: RE: Revised Estimates, PE: Provisional Estimates, AE: Advance Estimates

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- As shown in the Figure below, the area sown under Kharif and Rabi crops, **and the production of wheat and rice has been steadily increasing over the years**. In line with the longer-term trend, the area sown in the Kharif cycle of 2021-22 was again higher than in the previous year. In the current year, food grains production for the Kharif season is estimated to post a record level of 150.5 million tonnes.
- The area under production of rice and wheat had increased steadily during 2015-21. During all these years the area under production of rice is more then the production of wheat. From the figure below, during FY 2019-20, area under production of rice and wheat is 1200 lakh ha and 1075 lakh ha (approx) respectively. Similarly during FY 2020-21, area under production of rice ad wheat is 1210 lakh ha and 1080 la ha respectively. **Hence, statement 1 is not correct.**

Figure 5: Area Sown under Foodgrains

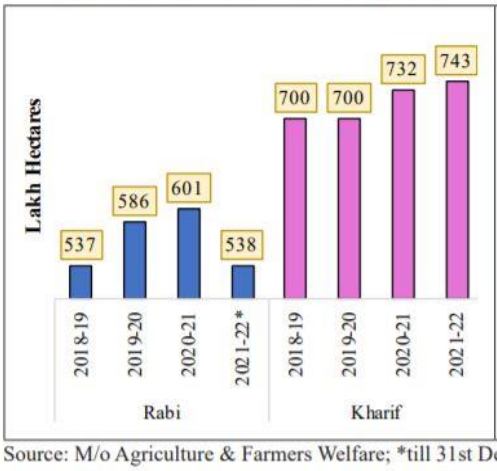
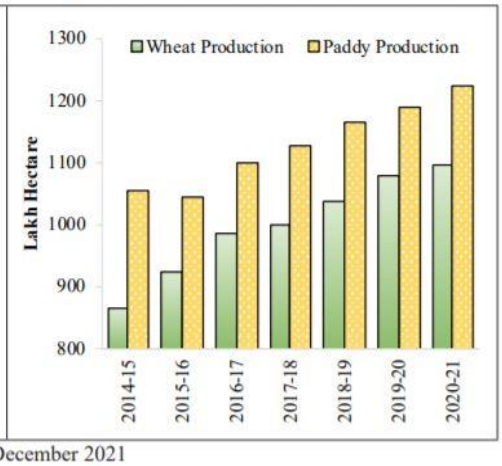


Figure 6: Production of Wheat and Rice



Source: M/o Agriculture & Farmers Welfare; *till 31st December 2021

- The area under foodgrain production during the last three years is significantly higher in the Kharif season than in the Rabi season. **Hence, statement 2 is correct.**

Q 40.D

- **India's Initiatives at the International Stage:**
  - **Lifestyle for Environment (LIFE):** In November 2021, the Prime Minister of **India** proposed a One-Word Movement in the context of climate: **LIFE - Lifestyle for Environment, at the COP 26 in Glasgow.** This movement calls for coming together with collective participation, to take lifestyle for the environment forward as a campaign and as a mass movement for an environmentally conscious lifestyle.
  - India established the **Green Grids Initiative - One Sun One World One Grid (GGI-OSOWOG)** project in collaboration with the **United Kingdom at the World Leaders' Summit in Glasgow** to create an integrated global electricity grid. The goal of this project is to connect energy systems across borders in order to accelerate the transition to renewable energy. A joint GGI-OSOWOG Secretariat is being planned to be established at the International Solar Alliance Secretariat to mobilize political support and render technical support for the initiative.
  - **The Coalition for Disaster Resilient Infrastructure (CDRI)** is an international coalition of countries, **United Nations (UN) agencies, multilateral development banks,** the private sector, and academic institutions, that aims to promote disaster-resilient infrastructure. Its objective is to promote research and knowledge sharing in the fields of infrastructure risk management, standards, financing, and recovery mechanisms. **It was launched by the Indian Prime Minister at the 2019 UN Climate Action Summit.**
  - **Leadership Group for Industry Transition (LeadIT Group): LeadIT was launched by India and Sweden,** with the support of the World Economic Forum at the UN Climate Action Summit in New York in September 2019, as one of the nine action tracks identified by the UN Secretary-General to boost climate ambitions and actions to implement the Paris Agreement.
- **Hence option (d) is the correct answer.**

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Q 41.B

- Life expectancy at birth was 69.4 years for the period 2014-18; it has increased by 0.4 years from 2013-17. It varies widely across states. It is higher in urban areas (72.6 years) than in rural areas (68.0 years). **Hence statement 1 is not correct.**
- Females are expected to live longer (70.7 years) compared to males (68.2 years).In 2014-18 when compared to 2013-17, females are expected to live longer in most States/UTs both across the rural and urban areas, except for Bihar and Jharkhand. **Hence statement 2 is correct.**

Q 42.D

- India piloted a resolution on **'Addressing Single-Use Plastic Product Pollution' which was adopted by the Fourth United Nations Environment Assembly** held in 2019. The resolution recognizes the need for the global community to act on the single-use plastic products pollution.
- The following domestic regulatory actions have been taken in 2021:
  - In August 2021, the Ministry of Environment, Forest and Climate Change, Government of India, notified the Plastic Waste Management Amendment Rules, 2021 prohibiting identified single use plastic items, which have low utility and high littering potential, by 2022. **The manufacture, import, stocking, distribution, sale and use of identified single-use plastic, including polystyrene and expanded polystyrene, commodities shall be prohibited with effect from the July 1, 2022. Hence statement 2 is correct.**
- The **Plastic Waste Management Rules, 2016**, mandate the generators of plastic waste to take steps to minimize generation of plastic waste. The rules also mandate the responsibilities of local bodies, gram panchayats, waste generators, retailers and street vendors to manage plastic waste. The Plastic Waste Management Rules, 2016 **cast Extended Producer Responsibility on Producer, Importer, and Brand Owner.** Extended Producer Responsibility shall be applicable to both pre-consumer and post-consumer plastic packaging waste. **Hence statement 3 is correct.**
- In order to stop littering due to light-weight plastic carry bags, the thickness of plastic carry bags has been increased from fifty microns to seventy five microns with effect from September 30, 2021 and to one hundred and twenty microns with effect from December 31, 2022. Increased thickness of plastic bags will also allow reuse.
- For effective implementation of Extended Producer Responsibility the **Guidelines for Extended Producer Responsibility being brought out have been given legal force through Plastic Waste Management Amendment Rules, 2021. Hence statement 1 is correct.**
- **Hence option (d) is the correct answer.**

Q 43.B

- PM e-VIDYA: Launched in 2020, PM e-Vidya unifies all efforts related to digital/online/on-air education to enable coherent multi-mode access to education. **Hence option (b) is the correct answer.**
  - The components of PM e-VIDYA for school education are:
    - One Nation, One Digital Education (DIKSHA) Platform;
    - One Class, One TV channel through Swayam Prabha TV Channels;
    - Extensive use of Radio, Community Radio, and Podcasts;
  - The PM eVidya program will be expanded by the government under one class one TV program from 12 to 200 TV channels in order to impart supplementary teaching and build a resilient mechanism for education. This has been announced by the finance minister Nirmala Sitharaman while presenting the union budget 2020-23 in the parliament.

Q 44.A

- **A new study on integrated farming practices has found that the four methods are worth following in India.** This work found that
  - **Relay planting** enhances yield,
  - **Strip rotation** (Within-field rotation) was more fruitful,
  - **Soil mulching** and **No-till or reduced tillage**, when compared with traditional monoculture cropping:
    - Increases the annual crop yield up by 15.6% to 49.9%, and
    - Decreases the environmental footprint by 17.3%.
    - While these methods are not easy for small farmers in India, they could be practiced at least on larger farms.

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- **Relay planting means the planting of different crops in the same plot, one right after another, in the same season. Hence, statement 3 is correct.**
  - The second crop is planted into an established stand of the main crop.
  - The second crop develops fully after the main crop is harvested.
  - Examples - Planting rice and summer gourd in the same season.
  - If this method is followed, there is less risk since you do not have to depend on one crop alone.
  - It also means better distribution of labor, insects spread less, and any legumes actually add nitrogen to the soil.
  - However, the difficulties involved in relay cropping are difficulty in mechanization and higher requirements for management.
  - **Strip Cropping**
    - It is a practice of growing field crops in narrow strips either at right angles to the direction of the prevailing wind or following the natural contours of the terrain to prevent soil erosion by wind and water.
    - It involves planting crops in strips across the slope, with alternate strips of grain and/or forage crops.
    - It is used when a slope is too steep or too long, or otherwise when one does not have an alternative method of preventing soil erosion.
    - It is more effective in reducing soil losses, as it combines,
    - Soil & moisture conserving properties of cross-slope farming with Soil building advantages of a crop rotation.
    - Strip cropping has been used **in the U.S. (where the fields are larger than those in India), where they grow wheat,** along with corn and soybean, on the same farm in an alternative manner. However, this needs large lands.
    - In India, **it is used in large fields** such as the ones owned by cities and state governments. **Hence, statement 1 is not correct.**
  - **Soil Mulching**
    - Soil mulching is the application of a layer of material (mulch) to the surface of an area of soil.
    - It requires keeping all bare soil covered with straw, leaves, and the like, even when the land is in use.
    - As mulch **prevents rain from hitting the soil directly, the impact of the water drops is reduced.**
    - **Erosion is curtailed, moisture retained, and beneficial organisms, such as earthworms, are kept in place. Mulching adds organic matter to the soil. Hence, statement 2 is correct.**
    - Mulch decreases water loss due to evaporation.
    - The same set of benefits is also offered by not tilling the soil.
  - **No-till Farming**
    - No-till farming (or zero tillage or direct drilling) is a technique for growing crops or pasture without disturbing the soil through tillage.
    - In this, not only the soil is left undisturbed by tillage and but also the residue is left on the soil surface.
    - In zero tillage, herbicide functions are extended. Before sowing, the vegetation present has to be destroyed for which broad-spectrum, non-selective herbicides with relatively short residual effects are used.

Q 45.D

- **Recent Context:** The **Central government is working on a National Policy On Synthetic Biology.**
  - Synthetic Biology is a field of science that involves redesigning organisms by engineering them to have new abilities.
  - It designs and constructs new biological parts, devices, and systems, and re-designs the existing, natural biological systems for useful purposes.
  - It harnesses the power of nature to solve problems in medicine, manufacturing, and agriculture.
  - Some examples of use of Synthetic Biology are:
    - Microorganisms are harnessed for bioremediation to clean pollutants from our water, soil, and air.
    - Rice is modified to produce beta-carotene, a nutrient usually associated with carrots that prevent vitamin A deficiency.
    - Yeast engineered to produce rose oil as an eco-friendly substitute for real roses that perfumers use to make luxury scents.

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- Difference - In some ways, synthetic biology is similar to "genome editing" because both involve changing an organism's genetic code. However, there is a distinction between these two approaches based on how that change is made.
  - In synthetic biology, scientists typically stitch together long stretches of DNA and insert them into an organism's genome.
  - These synthesized pieces of DNA could be genes that are found in other organisms or they could be entirely novel.
  - In genome editing, scientists typically use genome editing tools to make smaller changes to the organism's own DNA. These tools can also be used to delete or add small stretches of DNA in the genome.
  - Synthetic biology can be used to synthesize an organism's entire genome. It could be used to develop biological weapons.
- **The first synthetic bacterial genome was completed in 2008 with the synthesis of the genome of Mycoplasma genitalium, a bacterium that can cause urinary and genital tract infections in humans.**
- **Current Uses of Synthetic Biology:**
  - **Naturally Replicating Rubber for Tires**
  - Delivering Economic, Renewable BioAcrylic
  - **Making "Green Chemicals" from Agricultural Waste**
  - Developing a Suite of Biobased Products and Services
  - Engineering Low-Cost Sugars for Petroleum Substitute
  - **Producing Biofuels and Renewable Chemicals as Petroleum Alternatives**
  - **Increasing Rates of Natural Fermentation** for PolymersIncreasing Efficiency **in Bioprocessing of Pharmaceuticals.**

- **Hence option (d) is the correct answer.**

Q 46.D

- **Sachindra Nath Sanyal (1893 – 1942): His 80th death anniversary was observed on 7th February this year. He was born in 1893.**
- His role in India's struggle for Independence:
  - He was the **founder of the Hindustan Republican Association.** HRA was created to carry out armed resistance against the British Empire in India.
  - Sanyal founded a branch of the **Anushilan Samiti in Patna in 1913.**
  - In the 1912 Delhi Conspiracy Trial, Sanyal with Rashbehari Bose attacked the then Viceroy Hardinge.
  - He was extensively involved in the plans for the Ghadar conspiracy and went underground after it was exposed in February 1915. He was a close associate of Rash Behari Bose.
  - After Bose escaped to Japan, Sanyal was considered the most senior leader of India's revolutionary movement.
  - He was a mentor for revolutionaries like Chandrashekhar Azad and Bhagat Singh.
  - Sanyal and Mahatma Gandhi engaged in a famous debate published in Young India between 1920 and 1924. Sanyal argued against Gandhi's gradualist approach.
  - Sanyal was sentenced to life for his involvement in the Kakori conspiracy and was imprisoned at Cellular Jail in the Andaman and Nicobar Islands, where he wrote **his book titled Bandi Jeevan (A Life of Captivity, 1922).**
- **Hence option (d) is the correct answer.**

Q 47.B

- Annual Status of Education Report (ASER) 2021, highlighted due to pandemic-induced hardship that children in rural areas have moved out of private to government schools in all three age groups.
  - Possible reasons suggested for the shift are:
    - shut down of low-cost private schools, financial distress of parents,
    - free facilities in government schools, and families migrating back to villages.
- GER is defined as total enrolment in a particular level of school education, regardless of age, expressed **as a percentage of the population of the official age group** (and not total population) which corresponds to the given level of school education in a given school year. **Hence statement 1 is not correct.**
  - In 2013-14 the overall gross enrolment ratio was pegged at 107. It showed a declining trend after 2015-16. In 2019-20 it is at the 103. **Hence statement 2 is correct.**

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Q 48.B

- Union Budget 2022 highlighted that, 2023 has been announced as the International Year of Millets and in turn, support will be provided for post-harvest value addition, enhancing domestic consumption, and for branding millet products nationally and internationally.
- **India produces all the nine commonly known millets and is the largest producer and second-largest exporter of millets globally.** The Department of Agriculture and Farmers Welfare (DA&FW) is implementing a Sub-Mission on Nutri-Cereals (Millets) under National Food Security Mission (NFSM) to enhance the area, production & productivity of millets including bajra. Through the efforts made by the Government, the production of millets has increased from 14.52 million tonnes in 2015-16 to 17.96 million tonnes in 2020-21. H**ence, statement 1 is correct.**
- In view of the nutritional value of the millets, the Government has notified millets as Nutri-cereals in April 2018. Millets are also increasingly finding favor among farmers for being climate-friendly crops that are drought resistant, growing in infertile soil. **Hence, statement 2 is correct.**
- The Millets are a rich source of Protein, Fibre, Minerals, Iron, and Calcium. T**hey are gluten-free with a low glycemic index** w**hich constitutes good food for people suffering from diabetes.** It had also been found that millets were anti-carcinogenic foods and anti-hypertensive and they help prevent obesity and heart diseases. **Hence, statement 3 is not correct.**

Q 49.A

- **Medaram Jathara**
  - **Why in news?**
  - The Ministry of Tribal Affairs has sanctioned 2.26 Crores for various activities pertaining to Medaram Jathara 2022.
  - Medaram Jatara or Sammakka Saralamma Jathara is the largest tribal religious congregation in the world.
  - It is the second-largest fair in India, after the Kumbh Mela.
  - It is celebrated by the second-largest Tribal Community of Telangana- the Koya tribe.
  - The four days' Medaram Jathara is celebrated once in 2 years in the month of "Magha" (February) on the full moon day.
  - It honors the fight of a mother and daughter, Goddesses Sammakka and Saralamma, with the reigning rulers against an unjust law. **Hence option (a) is the correct answer.**
  - Significance - Medaram Jathara was declared a State Festival of Telangana in 1996.
  - It assists the tribals to preserve their unique Tribal Traditions, Culture and Heritage and promoting their tribal History on a global scale.
- **Attukal Pongala Festival**
  - **Why in news:**
  - The Attukal Pongala festival in Kerala will be a muted affair this year with strict Covid-19 protocols limiting rituals to the temple and homes.
  - The Attukal Pongala of Kerala is the world's largest congregation of women for a festival.
  - It is a famous festival celebrated annually at Attukal Bhagavathy Temple, Thiruvananthapuram in Kerala.
  - It is a 10 days event commencing on the Karthigai star of the Malayalam month of Makaram or Kumbham and closing with the sacrificial offering known as Kuruthitharpanam at night.
  - Pongala, which means 'to boil over, is the ritual in which women prepare sweet payasam (a pudding made from rice, jaggery, coconut, and plantains cooked together) and offer it to the Goddess or 'Bhagavathy'.
  - This ritual can only be performed by women.
- **Byanjana Dwadashi**
  - **Why in news:**
  - The Byanjana Dwadashi festival of Odisha is seen as a great step towards promoting food security.
  - Byanjana Dwadashi festival is celebrated in Odisha's temple town of Puri.
  - It celebrates a variety of food (Byanjana) on the 12th day (Dwadashi) of the Sukla Paksha or waxing phase of the moon in the month of Margashira (mid-December to mid-January).
  - This festival commemorates an episode of the Mahabharata where Yashoda observes that her son Krishna is pale and weak.

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- **Kenduli Mela:**
  - **Why in news?**
  - Celebrated from January 14 to January 16.
  - It is celebrated in the Birbhum district of West Bengal is most well known for the gathering of the Bauls, a group of mystic minstrels.
  - They are the bearers of a unique musical tradition, who are identified by their saffron attire and distinctive musical instrument, the Ektara.
  - They have the proud distinction of being included in the list of "Masterpieces of the Oral and Intangible Heritage of Humanity" by UNESCO.

Q 50.D

- **Crude oil and natural gas are not covered under GST,** they come under two separate streams of indirect taxation where cross-utilization of tax credits is not possible. Refiners like Indian Oil Corp. and Reliance Industries Ltd. use crude oil, which is outside GST, but various other inputs that go into refining operations would attract GST. Also, while some of their finished products such as petrol, diesel and jet fuel are outside GST and attract central excise duty and state-level value added taxes (VAT), others **such as naphtha, light diesel oil, waxes, bitumen and other refinery byproducts come under GST. Hence statement 1 is not correct.**
- **City Gas Distribution Network** is an interconnected network of pipelines to supply natural gas in the form of piped natural gas. Under Petroleum and Natural Gas Regulatory Board (PNGRB) Act, 2006, PNGRB grants authorization to entities for developing a CGD network including a PNG network in a specified geographical area of the country. **Hence statement 2 is not correct.**
- The "**Lakshya Bharat Portal**" launched in September, 2021 requires all oil and gas organizations to **upload details of various items procured by them including the future requirements.** The portal is planned to mature into a central information pool for sourcing of capital goods and MRO (maintenance, repair and overhaul) of items of the oil and gas companies which in turn is **expected to provide clear demand projections** to enable the manufacturers to enhance their capacity and scope. This portal, which is accessible to all stakeholders is an important step towards AtmaNirbhar Bharat. **Hence statement 3 is not correct.**
- **Hence option (d) is the correct answer.**

Q 51.D

- Capital expenditure is the money spent by the government on the development of machinery, equipment, building, health facilities, education, etc. It also includes the expenditure incurred on acquiring fixed assets like land and investment by the government that gives profits or dividends in the future. It holds the key to speedy and sustained economic revival and consolidation through its multiplier effect.
- Considering the above imperative, the outlay for capital expenditure in the Union Budget is once again being stepped up sharply by 35.4 percent from 5.54 lakh crore in the current year to 7.50 lakh crore in 2022-23. T**his has increased to more than 2.2 times the expenditure of 2019-20**. **This outlay in 2022-23 will be 2.9 percent of GDP. Hence, statement 2 is not correct.**
- Effective Capital expenditure is the capital expenditure taken together with the provision made for the creation of capital assets through Grants-in-Aid to States. **The 'Effective Capital Expenditure' of the Central Government is estimated at Rs. 10.68 lakh crore in 2022-23, which will be about 4.1% of GDP. Thus it will be greater vis-à-vis outlay for Capital expenditure. Hence, statement 1 is not correct.**

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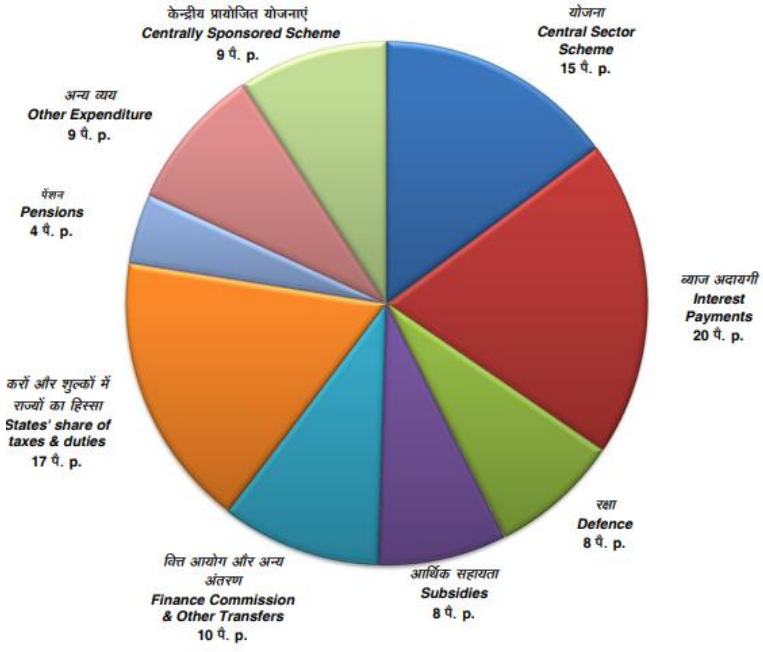
Q 52.A

- **Rupee Goes To(Budget 2022-23)**



- **Hence, option (a) is the correct answer.**

Q 53.B

- The Constitution of India provides for the manner in which the accounts of the Government have to be kept. Article of the Constitution provides for creation of a Consolidated Fund of India, Contingency Fund and Public Account.
- All revenues received, loans raised and all moneys received by the Government in repayment of loans are credited to the Consolidated Fund of India and all expenditures of the Government are incurred from this fund. Money can be spent through this fund only if appropriated by the Parliament.
- Public Accounts of India is constituted under Article 266(2) of the Constitution. All other public money (other than those covered under the Consolidated Fund of India) received by or on behalf of the Indian Government are credited to this account/fund.
- Total liabilities of the Central Government include **debt contracted against the Consolidated Fund of India, technically defined as Public Debt**, as well as liabilities in the Public Account. **Hence, statement 1 is not correct.**
- Central Government's total outstanding liabilities were at 117.04 lakh crore at end-March 2021. **Public Debt accounted for 89.9 per cent of totalliabilities**, while Public Account Liabilities, which include National Small Savings Fund, State Provident Funds, Reserve Funds and Deposits and other Accounts, constituted the remaining 10.1 per cent. **Hence, statement 2 is correct.**

Q 54.D

- Water is a critical input for agriculture which accounts for about 80 percent of the current water use in the country. The share of net irrigated area accounts for about 49 percent of the total net sown area in the country and out of the **net irrigated area, about 40 percent is irrigated through canal systems and 60 percent through groundwater. Hence statement 1 is not correct.**
- The overall stage of groundwater development (**ratio of annual groundwater draft and net annual groundwater availability**) in the country is 63 percent. This ratio signifies the rate of extraction of groundwater is very high **(more than 100 percent) in the states of Delhi, Haryana, Punjab, and Rajasthan.** Himachal Pradesh, Tamil Nadu, Uttar Pradesh, and UTs of Chandigarh and Puducherry fall in the medium category with the ratio ranging between 70-100 percent.
- Increased coverage under micro-irrigation can be the most effective mode of water conservation. With the objective of facilitating the States in mobilizing resources for expanding coverage of micro-irrigation, a **Micro Irrigation Fund (MIF) with a corpus of ₹ 5000 crore was created with National Bank for Agriculture and Rural Development (NABARD) during 2018-19.** Moreover, the Government of India

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is promoting micro-irrigation viz. Drip and Sprinkler Systems in the Country for enhancing water use efficiency at farm level under the Per Drop More Crop component of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY-PDMC) from 2015-16. **Hence statement 2 is not correct.**

Q 55.B

- **Crops Diversification Programme (CDP) is being implemented in the original green revolution states viz. Punjab, Haryana, and Western UP** as a **sub-scheme of Rashtriya Krishi Vikas Yojana (RKVY)** since 2013-14 to shift area under paddy cultivation towards less water requiring crops such as oilseeds, pulses, coarse cereals, Nutri cereals, cotton, etc.
- The CDP also focuses on **shifting areas under tobacco farming to alternative crops/ cropping systems in tobacco growing States**, namely, Andhra Pradesh, Bihar, Gujarat, Karnataka, Maharashtra, Odisha, Tamil Nadu, Telangana, Uttar Pradesh, and West Bengal with effect from 2015-16. An amount of ₹ 120 crores as Central Share (₹ 110 crores to CDP in the **Original Green Revolution States** and ₹ 10 crores to CDP for replacing tobacco farming) have been earmarked for implementation of the program during 2021-22.
- **Hence option (b) is the correct answer.**

Q 56.A

- ·**Option (a) is not correct**: Union Finance Minister, while presenting Union Budget for 2022-23 announced the **National Ropeways Development Programme – "Parvatmala"**, which will be a preferred ecologically sustainable **alternative in place of conventional roads** in difficult hilly areas.
- **Option (b) is correct**: **It will be taken up on PPP mode**. The idea is to improve connectivity and convenience for commuters, besides promoting tourism. This may also cover congested urban areas, where a conventional mass transit system is not feasible.
- **Option (c) is correct**: The Ministry of Road Transport and Highways (MORTH) has so far been responsible for the development of Highways and regulating the road transport sector across the country. However, in February 2021, the Government of India (Allocation of Business) Rules 1961 was amended, which enables the Ministry to also look after the development of Ropeways and Alternate Mobility Solutions. **MORTH will take National Ropeway Development Programme named "Parvatmala", similar to the "Bharatmala" program.**
- **Option (d) is correct**: The Finance Minister announced that contracts for 8 ropeway projects for a length of 60 km would be awarded in 2022-23. The scheme is being presently started in regions like Uttarakhand, Himachal Pradesh, Manipur, Jammu & Kashmir, and the other North-Eastern states.

Q 57.C

- **Recent Context: Scientists have found bees that have evolved to eat and digest meat — not just fresh but carrion as well, an ability which gives them their name of 'vulture bees**.
  - **These are tropical stingless bee species** that have evolved into carrion-feeding or meat-eating bees. **Hence, statement 1 is correct.**
  - **These bees are the only bees in the world that have evolved to use food sources not produced by plants. Hence, statement 2 is correct.**
  - These bees have evolved an extra tooth for biting flesh and an acidic gut that more closely resembles that of vultures rather than other bees.
  - Typically, bees don't eat meat. But the Vulture Bees has evolved the ability to do so, presumably due to intense competition for nectar.
  - Unlike humans, whose guts change with every meal, the guts of most bee species are colonized by the same 5 core microbes over 80 million years of evolution. But, given their radical change in food choice, it is found that the vulture bees' gut bacteria differed dramatically from those of a vegetarian bee.
  - Gut bacteria, like Lactobacillus, harbor Carnobacterium, which helps vulture bees fight pathogens on rotting meat. They help produce acid which helps the bees to fight toxins that form on rotting flesh.

Q 58.A

- **NITI Aayog today released a comprehensive report titled Health Insurance for India's Missing Middle**, which brings out the gaps in the health insurance coverage across the Indian population and

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offers solutions to address the situation. The report is an effort to re-invigorate the dialogue on increasing financial protection for health and the broader goal of Universal Health Coverage. It outlines the current landscape, existing gaps and articulates broad recommendations and pathways to increase health insurance coverage.

- **The Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana—a flagship scheme towards Universal Health Coverage, and State Government extension schemes—provides comprehensive hospitalization cover to the bottom 50% of the population. Around 20% of the population is covered through social health insurance, and private voluntary health insurance primarily designed for high-income groups. The remaining 30% of the population, devoid of health insurance, is termed as the "missing middle".** The missing middle contains multiple groups across all expenditure quintiles and is spread across both urban and rural areas.
- The report highlights the need for designing a low-cost comprehensive health insurance product for the missing middle. It primarily recognizes the policy issue of low financial protection for health for the missing middle segment and highlights health insurance as a potential pathway in addressing that. In doing so, the report offers a starting point for broader discussions on solutions, and specific products, to improve insurance coverage for the missing middle.

Q 59.C

- **Recent Context: India's Polar Satellite Launch Vehicle PSLV-C52 injected Earth Observation Satellite EOS-04**, into an intended sun-synchronous polar orbit of 529 km altitude from Satish Dhawan Space Centre, SHAR, Sriharikota. **Hence, statement 1 is correct.**
- **EOS-04 is a Radar Imaging Satellite** designed to provide high-quality images under all weather conditions for applications such as Agriculture, Forestry & Plantations, Soil Moisture & Hydrology, and Flood mapping. **Hence, statement 2 is correct.**
- PSLV-C52/EOS-04 has a mission life of 10 years.
- The vehicle also placed two small co-passenger satellites,
- A **student satellite (INSPIREsat-1)** from the Indian Institute of Space Science & Technology **(IIST)** in association with the Laboratory of Atmospheric & Space Physics at the University of Colorado, and a **technology demonstrator satellite (INS-2TD) from ISRO**, which is a precursor to India-Bhutan Joint Satellite (INS-2B). **Hence, statement 3 is not correct.**

Q 60.D

- The covid-19 pandemic has had an adverse impact on most sectors of the economy, the services sector has been the worst affected as its' share in India's GVA declined from 55 percent in 2019-20 to 53 percent in 2021-22.
- During the first half of the current fiscal year, the services sector has registered a steady recovery. Overall, the services sector grew by 10.8 percent in the first half of 2021-22.

Table 1: Services Sector Performance

Sector	Share in GVA (per cent)	Growth (YoY) (per cent)						
	2021-22 (AE)	2018-19 (2nd RE)	2019-20 (1st RE)	2020-21 (PE)	2021-22 (AE)	2021-22		
						Q1	Q2	H1
Total Services (Excluding construction)	53	7.2	7.2	-8.4	8.2	11.4	10.2	10.8

- Maharashtra and Karnataka are the top two contributors to services GSVA, with Rs 15.1 lakh crore and Rs 9.71 lakh crore gross value added by the services sector in 2020-21 respectively. **Hence option (d) is the correct answer.**

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- The services sector is the largest recipient of FDI inflows in India. According to the World Investment Report 2021 by the UN Conference on Trade and Development (UNCTAD), India was the fifth-largest recipient of Foreign Direct Investment (FDI) in 2020 improving its rank by four places, from the ninth position in 2019.

Q 61.B

Table 2: Break up of central government receipts in 2022-23 (Rs crore)

	Actuals 2020-21	Budgeted 2021-22	Revised 2021-22	Budgeted 2022-23	% change (RE 2021-22 to BE 2022-23)
Gross Tax Revenue	**20,27,104**	**22,17,059**	**25,16,059**	**27,57,820**	**9.6%**
of which:					
Corporation Tax	4,57,719	5,47,000	6,35,000	7,20,000	13.4%
Taxes on Income	4,87,144	5,61,000	6,15,000	7,00,000	13.8%
Goods and Services Tax	5,48,778	6,30,000	6,75,000	7,80,000	15.6%
Customs	1,34,750	1,36,000	1,89,000	2,13,000	12.7%
Union Excise Duties	3,91,749	3,35,000	3,94,000	3,35,000	-15.0%
Service Tax	1,615	1,000	1,000	2,000	100.0%
A. Centre's Net Tax Revenue	**14,26,287**	**15,45,397**	**17,65,145**	**19,34,771**	**9.6%**
Devolution to States	**5,94,997**	**6,65,563**	**7,44,785**	**8,16,649**	**9.6%**
B. Non Tax Revenue	**2,07,633**	**2,43,028**	**3,13,791**	**2,69,651**	**-14.1%**
of which:					
Interest Receipts	17,113	11,541	20,894	18,000	-13.9%
Dividend and Profits	96,877	1,03,538	1,47,353	1,13,948	-22.7%
Other Non-Tax Revenue	93,641	1,27,948	1,45,544	1,37,703	-5.4%
C. Capital Receipts (excl. borrowings)	**57,626**	**1,88,000**	**99,975**	**79,291**	**-20.7%**
of which:					
Disinvestment	37,897	1,75,000	78,000	65,000	-16.7%
Receipts (without borrowings) (A+B+C)	**16,91,546**	**19,76,425**	**21,78,911**	**22,83,713**	**4.8%**
Borrowings	**18,18,291**	**15,06,812**	**15,91,089**	**16,61,196**	**4.4%**
Total Receipts (including borrowings)	**35,09,836**	**34,83,236**	**37,70,000**	**39,44,909**	**4.6%**

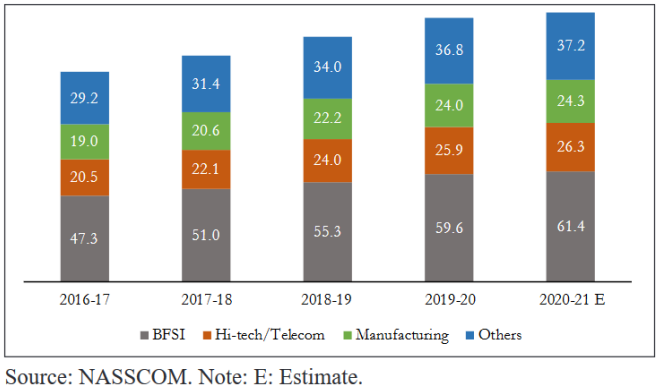
Sources: Receipts Budget, Union Budget Documents 2022-23; PRS.

- **Hence, option (b) is the correct answer.**

Q 62.B

- **United States** remained the biggest source of exports revenues amounting to US$ 92.1 billion in 2020-21 This accounts for about 62 percent of total IT-BPM exports (excluding hardware and e-commerce). **Hence statement 1 is not correct.**
  - Europe (excluding the UK) and Asia-Pacific account for 11.5 percent and 7.7 percent respectively of the export earnings of India.
- The share of Software & Engineering services in the IT-BPM sector, which was consistently growing each year, saw a slight decline to 20.78 per cent in 2020-21.
- Banking, Financial Services, and Insurance (BFSI) contributed US$ 61.4 billion, accounting for over 41 percent of the exports. **Hence statement 2 is correct.**

Figure 6: Sector wise break up of Indian IT BPM Export Revenues (excluding hardware & e-commerce) (US$ billion)



Source: NASSCOM. Note: E: Estimate.
Note: Others include emerging sectors like Retail, Healthcare, Media etc.

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Q 63.A

- Recently, **Turkey has withdrawn from Istanbul Convention on Violence Against Women** which has received severe criticism from various quarters and has led to protests across the country. Turkey has withdrawn despite the alarmingly high rates of violence and femicide in the country.
- The **Council of Europe** established the Istanbul Convention, a human rights treaty, with the aim to prevent and prosecute all forms of violence against women, promote gender equality and ensure protection and rehabilitation of women who are victims of violence. The treaty was opened for ratification in May 2011. From the European Union, 34 countries signed this treaty.
- **Governments that agree to be bound by the Convention will have to do the following:**
  - Train professionals in close contact with victims
  - Regularly run awareness campaigns
  - Take steps to include issues such as gender equality and non-violent conflict resolution in interpersonal relationships in teaching material.
  - Set up treatment programmes for perpetrators of domestic violence and for sex offenders
  - Work closely with NGOs
  - Involve the media and the private sector in eradicating gender stereotypes and promoting mutual respect.
  - Preventing violence against women and domestic violence should not be left to the state alone. In fact, the Convention calls on all members of society, in particular men and boys, to help reach its goal of creating a Europe free from all forms of violence against women and domestic violence.

Q 64.A

- **CHAMPIONS - Creation and Harmonious Application of Modern Processes for Increasing the Output and National Strength** is a **single window system launched for the MSMEs.** As the name suggests it will aim at Creation and Harmonious Application of Modern Processes for Increasing the Output and National Strength. Accordingly, the name of the system is CHAMPIONS. This is basically for making the smaller units big by helping and handholding, in particular, by solving their problems and grievances. **Hence option (a) is the correct answer.**
- **Three basic objectives of the CHAMPIONS:**
  - To help the MSMEs in this difficult situation in terms of finance, raw materials, labour, permissions, etc.
  - To help the MSMEs capture new opportunities in manufacturing and services sectors.
  - To identify the sparks, i.e., the bright MSMEs who can withstand at present and become national and international champions.

Q 65.B

- Volatility Index is a measure of market's expectation of volatility over the near term.
- Volatility is often described as the "rate and magnitude of changes in prices" and in finance often referred to as risk.
- **India VIX is a volatility index based on the NIFTY Index Option prices. Hence statement 1 is not correct.**
- From the best bid-ask prices of NIFTY Options contracts, **a volatility figure (%) is calculated which indicates the expected market volatility over the next 30 calendar days. Hence statement 2 is correct.**
- "VIX" is a trademark of Chicago Board Options Exchange, Incorporated ("CBOE") and Standard & Poor's has granted a license to NSE, with permission from CBOE, to use such mark in the name of the India VIX and for purposes relating to the India VIX.

Q 66.B

- **Forest Area** refers to area recorded as forest in government records and is also called "recorded forest area". **Russia, Brazil, Canada, USA and China were the top five largest** countries by forest area in 2020, while **India was the tenth largest country by forest area.** Forests covered 24 per cent of India's total geographical area accounting for two per cent of the world's total forest area in 2020. **Hence statement 2 is correct.**

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- **Forest cover comprises all lands, more than one hectare in area, with a tree canopy density of more than 10 per cent,** irrespective of ownership and legal status. Such **lands may not necessarily be a recorded forest area, and also include orchards, bamboo and palm plantations.** India's total forest cover was 7,13,789 sq km in 2021 reflecting an increase of 3.14 per cent in the forest cover over 2011, from 21.05 per cent of the country's geographical area in 2011 to 21.71 per cent in 2021. **Hence statement 1 is not correct.**
- Below table shows the criteria used by the **15th Finance Commission** to determine each state's share in central taxes, and the weight assigned to each criterion.

Criteria	Weightage
Income Distance	45%
Area	15%
Demographic Performance	12.5%
Population (2011)	15%
Forest and Ecology	**10%**
Tax and Fiscal Efforts	2.5%

- **Hence statement 3 is correct.**
- **Hence option (b) is the correct answer.**

Q 67.B

- The Union budget 2021-22 announced, "The high level of provisioning by Public Sector Banks of their stressed assets calls for measures to clean up the bank books. An Asset Reconstruction Company (ARC) Limited and Asset Management Company (AMC) would be set up to consolidate and take over the existing stressed debt and then manage and dispose of the assets to Alternate Investment Funds and other potential investors for eventual value realization."
- In line with this vision, two entities, National Asset Reconstruction Company Limited (NARCL), and India Debt Resolution Company Limited (IDRCL) have been formed.
- NARCL was incorporated on 7th July 2021 and has received a certificate of registration from the RBI to commence the business of an Asset Reconstruction Company on 4th October 2021.
- **NARCL will majorly be owned by Public Sector Banks.**
- IDRCL was incorporated on 3rd September 2021 and **will have a minimum of 51 per cent ownership of Private sector Banks and the balance will be held by Public Sector Banks. Hence statement 1 is not correct.**
- NARCL and IDRCL's relationship will be defined through a debt management agreement wherein **NARCL will aggregate and acquire the stressed assets and IDRCL, in turn, will provide stressed assets management and resolution services to NARCL on an exclusive basis. Hence statement 2 is correct.**
- **The term of IDRCL shall be co-terminus with that of NARCL.**
- NARCL will acquire assets by making an offer to the lead bank and the lead bank with an offer in hand (of NARCL) will run a 'Swiss Challenge' process wherein other interested ARCs / Bidders will be invited to better the anchor offer made by NARCL.

Q 68.A

- India's external debt as of end-September 2021, estimated at US$ 593.1 billion, grew by US$ 22.3 billion (3.9 per cent) over the level as at end-June 2021.
- As far as currency composition of external debt is concerned, **US dollar-denominated debt remained the largest component of India's external debt, with a share of 51 per cent at the end-September 2021, followed by the Indian rupee.**
- External debt denominated in the Indian rupee witnessed an impressive increase over the years owing, inter alia, to a calibrated encouragement of FPI investment into the Indian debt market, apart from continued large accretion to Non-Resident External Rupee Account.
- Accordingly, being the second largest component, Indian rupee-denominated debt provides significant insulation from exchange rate fluctuations.

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- **The share of short-term debt in total external debt fell marginally to 17.0 per cent at the end-September 2021 from 17.7 per cent at end-March 2021. Hence, statement 1 is not correct.**
- Further, a sizeable accretion in reserves, however, led to an improvement in other external vulnerability indicators such as forex reserves to total external debt, short term debt to foreign exchange reserves, etc.
- **The foreign exchange reserves as a ratio to external debt crossed 100 percent after 11 years since 2010 and stood at 107.1 per cent as at end-September 2021.** The ratio of short-term debt (original maturity) to foreign exchange reserves declined to 15.8 per cent at end-September 2021 from 17.5 per cent at end-March 2021. **Hence, statement 2 is correct.**

Q 69.C

- The latest NFHS-5 shows that Total Fertility Rate (TFR), an average number of children per woman, has further come down to 2 in 2019-21 from 2.2 in 2015-16. The total fertility rate has even come down below the replacement level of fertility (2.1 children per woman) in the country. **Hence statement 1 is correct.**
- Overall Contraceptive Prevalence Rate (CPR) has increased substantially from 54% to 67% at the all-India level and in almost all Phase-II States/UTs with an exception of Punjab. The use of modern methods of contraceptives has also increased in almost all States/UTs.
- Institutional births have increased substantially from 79 percent to 89 percent at all-India levels. Institutional delivery is 100 percent in Puducherry and Tamil Nadu and more than 90 percent in 7 States/UTs out of 12 PhaseII States/UTs. **Hence statement 2 is correct**.
    - Along with an increase in institutional births, there has also been a substantial increase in C-section deliveries in many States/UTs, especially in private health facilities.

Q 70.A

- For effective implementation of various schemes and programmes of the Ministry of Women and Child Development, all major schemes of the Ministry have been **classified under 3 umbrella schemes viz. Mission Poshan 2.0, Mission Vatsalya, and Mission Shakti.**
- **Mission Vatsalya will be looking into child welfare services and child protection services all over the country. Hence, statement 1 is correct.**
- Mission Shakti will consist of the schemes and policies for the empowerment and protection of women. It will c**over schemes under two categories:**
    - **SAMBAL**: This category will include schemes such as One Stop Centre, Mahila Police Volunteer, Women's Helpline, Swadhar, Ujjawala among others.
    - **SAMARTHYA**: This category will include schemes such as Beti Bachao Beti Padhao, Pradhan Mantri Matru Vandana Yojana among others. **Hence, statement 2 is not correct.**
- Saksham Anganwadi and Mission POSHAN 2.0 scheme will include schemes such as Integrated Child Development Scheme(ICDS), Anganwadi Services, PoshanAbhiyan, Scheme for Adolescent Girls, NationalCreche Scheme among others.

Q 71.B

- India's external debt as at end-September 2021, estimated at US$ 593.1 billion, grew by US$ 22.3 billion (3.9 per cent) over the level as at end-June 2021. Excluding the valuation gains due to the appreciation of the US dollar, the increase in external debt would have been US$ 23.7 billion, instead of US$ 22.3 billion.
- **Commercial borrowings, the largest component of external debt, at US$ 218.8 billion**, recorded a quarter-over-quarter (q-o-q) positive growth of 2.5 percent over the level a quarter ago.
- **The NRI deposits, the second largest component, at US$ 141.6 billion** were at the same level as at end of the previous quarter.
- **The short-term trade credit, the third largest component, at US$ 97.4 billion** continued to contract. Together, these three components constitute 77.2 percent of total external debt as at end-September, 2021.

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Table 8: External Debt Outstanding

(US$ billion)

		Dec-19	Mar-20	Jun-20	Sep-20 PR	Dec-20 PR	Mar-21 PR	Jun-21 PR	Sep-21 P
1.	Multilateral	60.2	59.9 (-0.4)	64.7 (8.0)	67.0 (3.6)	68.1 (1.6)	69.7 (2.5)	70.2 (0.6)	71.4 (1.7)
2.	Bilateral	27.3	28.1 (2.9)	28.5 (1.6)	29.3 (2.7)	30.5 (4.3)	30.9 (1.3)	30.8 (-0.5)	30.9 (0.5)
3.	International Monetary Fund	5.5	5.4 (-1.3)	5.5 (0.8)	5.6 (2.3)	5.7 (2.3)	5.6 (-1.6)	5.7 (0.6)	23.3 (310.8)
4.	Trade Credit	6.9	7.0 (1.9)	6.8 (-2.6)	7.0 (2.8)	6.5 (-7.5)	6.3 (-3.1)	5.7 (-8.8)	5.6 (-1.7)
5.	Commercial Borrowings	223.1	219.5 (-1.6)	211.0 (-3.9)	206.8 (-2.0)	207.9 (0.5)	213.1 (2.5)	213.4 (0.2)	218.8 (2.5)
6.	NRI Deposits (above one-year)	133.1	130.6 (-1.9)	132.7 (1.6)	137.3 (3.4)	140.5 (2.3)	141.9 (1.0)	141.5 (-0.3)	141.6 (0.0)
7.	Rupee Debt	1.1	1.0 (-5.2)	1.0 (-5.2)	1.0 (2.0)	1.0 (0.9)	1.0 (-2.2)	1.0 (-0.8)	1.0 (-1.6)
8.	Total Long-Term Debt (1 to 7)	457.2	451.6 (-1.2)	450.2 (-0.3)	454.0 (0.8)	460.2 (1.4)	468.5 (1.8)	468.3 (-0.1)	492.5 (5.2)
9.	Short-term Debt	106.8	106.9 (0.1)	105.0 (-1.7)	102.8 (-2.1)	103.5 (0.7)	101.1 (-2.4)	102.5 (1.4)	100.6 (-1.9)
9a.	Trade Related Credits	102.4	101.4 (-1.0)	101.2 (-0.2)	99.4 (-1.8)	99.6 (0.2)	97.3 (-2.4)	99.2 (2.0)	97.4 (-1.8)
	Total (8+9)	**564.0**	**558.4 (-1.0)**	**555.2 (-0.6)**	**556.8 (0.3)**	**563.8 (1.3)**	**569.6 (1.0)**	**570.8 (0.2)**	**593.1 (3.9)**

- **Hence, option (b) is correct**.

Q 72.C

- **Recent Context: The Government has decided to use Crumb Rubber Modified Bitumen in bituminous pavement courses during road construction. Hence, statement 2 is correct.**
  - Bituminous pavements are constructed in different layers such as base course, binder course, and surface course.
  - Crumb rubber is recycled rubber produced by reducing scrap tires or other rubber into uniform granules. **Hence, statement 1 is correct.**
  - Crumb rubber is manufactured from 2 primary feedstocks:
  - Tire buffings, are a by-product of tire retreading and Scrap tire rubber.
  - During the recycling process, the inherent reinforcing materials such as steel and fiber are removed along with any other type of inert contaminants such as dust, glass, or rock.
  - Normal bitumen modified with crumb rubber & other additives has improved performance compared to normal bitumen.

Q 73.A

- The **Deposit Insurance and Credit Guarantee Corporation (Amendment) Act**, passed by the Parliament in 2021, made significant changes in the landscape of deposit insurance in India.
- **Deposit Insurance and Credit Guarantee Corporation Act, 1961** provided for the establishment of a corporation for the purpose of insurance of deposits and guaranteeing of credit facilities
- The functions of the Deposit Insurance and Credit Guarantee Corporation (DICGC) are governed by the provisions of the DICGC Act, 1961 and the DICGC General Regulations, 1961.
- Under the Act, the Corporation is liable to pay the insured deposit amount to depositors of an insured bank.
- Deposit insurance provided by DICGC covers all commercial banks, including **Payment Banks, Small Finance Banks, Regional Rural Banks, Foreign Bank branches in India, Local Area Banks and Co-operative Banks** in all States and Union Territories.
- **DICGC registers a bank as insured immediately and automatically when a banking license is issued to it.**
- The deposit insurance premium is compulsory for all insured banks and is paid by banks to DICGC and is **not recovered from the depositors.**
- **Hence option (a) is the correct answer.**

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Q 74.C

- The gasification of coal is a **process in which coal is partially oxidated by air, oxygen, steam, or carbon dioxide under controlled conditions to produce a fuel gas. Hence, statement 1 is not correct.**
- Coal gasification is considered a cleaner option compared to the burning of coal. Gasification facilitates the utilization of the chemical properties of coal. Syn Gas produced from Coal gasification is **usable in producing Synthetic Natural Gas (SNG), energy fuel (methanol & ethanol)**, ammonia for fertilizers, and petrochemicals. These products will help move towards self-sufficiency under Atmanirbhar Bharat Abhiyaan and help in achieving a methanol-based economy. **Hence, both statements 2 and 3 are correct.**
- **Syn Gas is a mixture of hydrogen (H2), carbon monoxide (CO) and carbon dioxide (CO2).**

Q 75.A

- To solve the liquidity issues of Ministry of Micro, Small & Medium Enterprises (MSMEs) and lay down the basic legal framework for factoring in India, the Factoring Regulation Act 2011 was enacted.
- Factoring is a business where an entity acquires the receivables of another entity for anamount.Receivables is the total amount that is owed or yet to be paid by the customers tothe assignor for the use of any goods, services or facility.Factor can be a bank, a registered non-banking financial company or any companyregistered under the Companies Act.
- As per the Factoring Act 2011, four types of entities were allowed to engage in factoring business: Banks, Statutory Corporations (which were exempted from registration under Section 5), NBFCs (which have to obtain registration from RBI) and companies (which have to obtain specific registration from RBI under Section 3).
- As per the Factoring Act 2011, RBI grants registration to only those NBFCs which do factoring as "principal business", that is whose financial assets in the factoring business constitute at least 50 per cent of its total assets and income derived from factoring business is not less than 50 per cent of its gross income.
- Under these provisions, only 7 NBFCs called 'NBFC-Factors' were in factoring business (due to "principal business" condition).
- Later the Factoring Regulation (Amendment) Act, 2021 was enacted with the **amendments in line with the recommendations of UK Sinha Committee. Hence statement 1 is correct.**
- **The Amendment Act led to the removal of principal business criteria and this has significantly increased the number of eligible NBFCs that can undertake factoring business. Hence statement 2 is not correct.**

Q 76.A

- India has maintained its impressive performance in world services trade in the post-COVID-19 period. Despite pandemic induced global restrictions and weak tourism revenues, India's services exports recorded growth of 18.4 per cent to US$ 177.7 billion during 2021-22 (April-December), over the corresponding period a year earlier.
- This is mainly on account of top three computers, business and transportation services that constitute more than 80 per cent of total services exports.
- From the table below, **India has a trade surplus in Services during 2019-20 and 2020-21. Hence, statement 1 is correct.**

Table 4: Services Trade Performance

				(US$ Billion)
	2019-20	2020-21	2020-21 (Apr-Dec)	2021-22 (Apr-Dec)* (P)
Services Exports	213.2	206.1	150.1	177.7
Services Imports	128.3	117.5	85.0	103.3

Source: Reserve Bank of India and Department of Commerce
Note: *: The data for December 2021 is an estimation; P: Provisional

- **Computer services exports continue to be the largest exported service in 2020-21 (seeTable 2).** They exhibited positive sequential growth since Q2: FY 21 on account of increasing demand for digital support, cloud services and infrastructure modernisation owing to new pandemic challenges. **Hence, statement 2 is not correct.**
- Exports of business services – the second major segment – also showed recovery underpinned by improvement in professional, management and consultancy services.

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- The transportation services exports grew by 40.7 per cent in H1: FY 22 to US$ 14.3 billion due to an increase in cross-border trade activity and the shortage in shipping containers impacting transport costs.

Table 2: India's Exports of Services

(US$ Million)

S. No.	Sector	2019-20				2020-21				2021-22 (P)	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
1	Manufacturing services on physical inputs owned by others	33	58	76	66	77	68	49	102	83	75
2	Maintenance and repair services n.i.e.	45	44	64	41	32	35	38	54	58	74
3	Transport	5343	5181	5448	5016	4805	5368	5602	6080	6733	7584
4	Travel	6950	7643	8545	6860	1868	2138	2170	2308	1597	2147
5	Construction	754	677	734	931	659	589	619	752	583	716
6	Insurance and pension services	588	602	617	623	564	590	575	647	772	796
7	Financial services	1287	1239	1183	1024	1009	1003	1068	1258	1201	1303
8	Charges for the use of intellectual property n.i.e.	319	248	184	182	399	313	359	238	191	202
9	Telecommunications, computer, and information services	23604	23947	24592	23967	23396	25515	26593	27574	28489	30823
	Of which: computer services	22811	23247	23760	23285	22623	24791	25782	26802	27602	29965
10	Other business services	11475	10878	11889	11474	11282	11624	12930	13324	12962	13858
11	Personal, cultural, and recreational services	532	551	535	588	500	530	579	727	647	713
12	Government goods and services n.i.e.	151	169	157	182	148	144	179	159	203	217
13	Others n.i.e.	1114	1539	1134	2105	2212	1875	2579	2781	2698	2915
	Total	52196	52777	55158	53060	46953	49793	53339	56004	56217	61421

Q 77.D

- A new scheme, **Prime Minister's Development Initiative for North-East, PM-DevINE** is announced in the Union Budget 2022-23 with an initial allocation of Rs. 1,500 crore.
- It will fund infrastructure, in the spirit of PM GatiShakti, and social development projects based **on the felt needs of the North-East**. This will enable livelihood activities for youth and women, filling the gaps in various sectors. However, it will not be a substitute for existing central or state Schemes. The central ministries may also pose their candidate projects but priority will be given to those posed by the states. **Hence, statement 1 is not correct.**
- **The Scheme will be implemented through the North-Eastern Council. Hence, statement 2 is not correct.**

Q 78.B

- Foreign Investment, consisting of foreign direct investment (FDI) and foreign portfolio investment (FPI), is the largest component of the capital account.
- Falling short of the pre-pandemic level, the net foreign investment inflows (FIIs) – primarily driven by FDI – moderated to US$ 25.4 billion in H1: FY 22 compared to the corresponding period of FY 21.
- As far as sector-wise FDI inflows are concerned, computer software and hardware attracted the highest FDI equity inflows of US$ 26.1 billion, amounting to 43.8% of total FDI inflows in 2020-21. **Hence, option (b) is correct.**

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Table 4: Sectors attracting highest FDI Equity Inflows

Rank	Sector	(US$ Billion)				Share (in Per cent)			
		2019-20	2020-21	2020-21 H1	2021-22 H1	2019-20	2020-21	2020-21 H1	2021-22 H1
1	Computer Software & Hardware	7.7	26.1	17.6	7.1	15.4	43.8	58.5	22.9
2	Automobile Industry	2.8	1.6	0.4	4.9	5.7	2.7	1.4	15.8
3	Services Sector**	7.9	5.1	2.3	3.2	15.7	8.5	7.5	10.1
4	Trading	4.6	2.6	0.9	2.1	9.2	4.4	3.2	6.6
5	Telecommunications	4.4	0.4	0.0	0.4	8.9	0.7	0.0	1.2
	Total Of Above	27.4	35.8	21.2	17.6	54.8	60.1	70.6	56.6
	Total FDI	50.0	59.6	30.0	31.2	100	100	100	100

- Singapore continues to be the top investing country in terms of FDI equity inflow while USA occupies the second position. The list of top five FDI sectors and investing countries is given below.

Table 5: Top Investing Countries FDI Equity Inflows

Rank	Country	US$ Billion				Share (in Per cent)			
		2019-20	2020-21	2020-21 H1	2021-22 H1	2019-20	2020-21	2020-21 H1	2021-22 H1
1	Singapore	14.7	17.4	8.3	8.1	29.4	29.2	27.7	25.9
2	U.S.A.	4.2	13.8	7.1	4.6	8.4	23.2	23.7	14.9
3	Mauritius	8.2	5.6	2.0	4.3	16.5	9.5	6.7	13.9
4	Netherlands	6.5	2.8	1.5	2.1	13.0	4.7	5.0	6.9
5	Japan	3.2	2.0	0.7	0.8	6.5	3.3	2.2	2.6
	Sum of Above	36.9	41.6	19.6	20.0	73.8	69.8	65.3	64.1
	All Countries *	50.0	59.6	30.0	31.2	100.0	100.0	100.0	100.0

Q 79.C

- The Ministry of Skill Development and Entrepreneurship launched ASEEM portal and App to help skilled people find sustainable livelihood opportunities.
- It is an Artificial Intelligence-based platform that will map details of workers based on regions and local industry demands and will bridge the demand-supply gap of skilled workforce across sectors and acts as a directory of the skilled workforce. **Hence statement 1 is correct.**
- It is developed and managed by National Skill Development Corporation (NSDC) in collaboration with Bengaluru-based company Betterplace. **Hence statement 2 is correct.**

Q 80.A

- **Retail inflation is measured by Consumer Price Index-Combined (CPI-C) inflation in India. Hence option (a) is the correct answer.**
- Retail Inflation was slightly above 6 per cent in 2020-21 owing to supply chain disruptions caused by COVID-19 restrictions, lockdowns, and night curfews, moderated during the current financial year.
- Retail inflation during 2021-22 (April-December) stood at 5.2 per cent.

Q 81.D

- **A liaison officer from Seychelles had joined the Information Fusion Centre for Indian Ocean Region (IFC-IOR) for Maritime Domain Awareness and information sharing.**

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- The Information Fusion Centre – Indian Ocean Region (IFC-IOR) was envisaged to address this very need to promote collaboration for maritime safety and security in view of the region's importance with respect to world trade and security.
- **Statement 1 is correct:** It was established by the Indian Navy to keep track of shipping traffic. It aims at strengthening maritime security in the region and beyond, by building a common coherent maritime situation picture and acting as a maritime security information sharing hub for the region. Since its inception, the Centre has established working level linkages with more than 50 nations and multinational/ maritime security centres.
- **Statement 2 is correct:** Its headquarters are presently located at Gurugram, Harayana.
- **Statement 3 is correct:** It provides regular update regarding monthly weather forecasts and weather warnings, specific studies/reports are also published by the Centre in this domain.

Q 82.A

- **Why in News?**
  - Union Minister of State for Culture Smt. Meenakshi Lekhi released a pictorial book on India's Women Unsung Heroes of Freedom Struggle as part of Azadi ka Mahotsav. The book celebrates the lives of some of the women who led the charge and lit the flame of protest and rebellion throughout the country. Some of the iconic leaders listed in the book are as follows
- **Rani Gaidinliu**
  - Rani Gaidinliu, (1915-1993) **the Naga spiritual and political leader**, led an armed uprising against the British in Manipur, Nagaland and Assam.
  - She belonged to the Rongmei tribe (also known as Kabui).
  - In 1927, at the age of 13 Gaidinliu joined the Heraka movement led by her cousin Haipou Jadonang
  - The movement aimed at the revival of the Naga tribal religion and establishing self-rule of the Nagas (Naga Raj) ending the British rule.
  - She was arrested and sentenced to life imprisonment.
  - After being released in 1947 she continued to work for the betterment of the community.
  - Things in honour - Nehru described Gaidinliu as the **"daughter of the hills"** and gave her the title of 'Rani' for her courage.
  - She was also awarded Tamra Patra and Padma Bhushan.
- **Usha Mehta**
  - Usha Mehta was a freedom fighter is remembered for **organizing an underground radio station** (Secret Congress Radio) during the Quit India Movement of 1942 to spread Gandhiji's message of 'Do or Die.
  - Mehta was **born in Saras, near Surat**. During her childhood, she met Mahatma Gandhi and became an ardent follower.
  - During Quit India Movement Mehta unfurled the Indian national movement's tricolour flag at Gowalia tank ground when the entire Congress leadership including Mahatma Gandhi was placed under arrest.
  - Mehta wrote a number of books, mainly on Gandhiji and his thoughts.
  - Her book on great Indian women 'Bharat Ki Mahan Nariyan' is well known.
  - She was awarded the prestigious Padma Vibhushan by the government of India.
- **Parbati Giri**
  - Parbati Giri, one of **Odisha's most prominent women freedom fighters, was called the Mother Teresa of Western Odisha** for her work in the upliftment of her people.
  - At the age of 16, she was actively involved in the Quit India Movement.
  - She adopted Gandhism as a way of life and her work manifested this virtue.
  - During 1940 she started organizing meetings and mobilised people to participate in Gandhiji's Khadi Andolan movement.
  - At Bargarh she ordered the lawyers to vacate the Court and stop cooperating with the British officials in legal matters.
  - She sat on the chair of the SDO posing as a judge and ordered other boys to bring the SDO tied with a rope for which she was jailed for 2 years.
  - She was **called "Banhi Kanya"** for her resilience and her aggressive nationalistic sentiments and free expression.
- **Tarkeshwari Sinha**
  - Tarkeshwari Sinha, a prominent freedom fighter during the Quit India Movement played an active role as a student leader **in Patna Women's College, at the age of 16.**
  - Later she went on to become an eminent politician in the early decades of independent India.

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- She served as a member of then Prime Minister Jawaharlal Nehru's council of ministers and was a four-time Member of Parliament.
- Sinha was the first female deputy finance minister of India. **Hence option (d) is the correct answer.**

- **Snehlata Varma**
  - Snehlata Varma, a freedom fighter and tireless worker for the education and upliftment of women **in Mewar, Rajasthan.**
- **Tileshwari Baruah**
  - Tileshwari Baruah, one of India's **youngest martyrs, was shot at the age of 12 by the British**, during the Quit India Movement, when she and some freedom fighters tried to unfurl the Tricolour atop a police station.
  - To honour her, the Assam town of Dhekiajuli observes September 20 as Martyrs' Day.

Q 83.A

- Union Budget 2022-23 proposed to introduce Central Bank Digital Currency (CBDC) or Digital Rupee that would be rolled out by Reserve Bank of India (RBI).
- A CBDC is central-bank-issued digital money denominated in a sovereign currency that can be used in contactless transactions. It would be legal tender and more like an electronic form of fiat currency. **It would be numbered in units, just like every fiat currency has a unique number.** It is the same as physical cash only its form is different; it's not printed on paper. **Hence, statement 1 is correct.**
- It will also **lead to a more efficient and cheaper currency management system and would be safer than holding cash that can be lost or stolen**, but it may require robust technology and pervasive mobile connectivity. H**ence, statement 2 is correct**.
- CBDC is a digital or virtual currency but it is not comparable to the private virtual currencies or crypto-currency that have mushroomed over the last decade. Private virtual currencies do not represent any person's debt or liabilities as there is no issuer. However, **Digital Rupee will appear on the balance sheet of the central bank as a liability and thus carry no risk. Hence, statement 3 is not correct.**

Q 84.C

- Ministry of Agriculture & Farmers Welfare, recently launched a multi-language Mobile App platform **'FARMS- Farm Machinery Solutions'.** It facilitates local farmers and citizens of the different States across the country with the Custom hiring services of Farm Machinery Banks, Custom Hiring Centers (CHC), and Hi-tech Hubs.
- This app will help the individual farmers, willing to provide their agricultural machinery & equipment on a rental basis to increase their farm income besides making the optimum utilization of the available Agricultural machinery available in CHCs/FMBs/Hi-tech Machinery Hubs. **This app helps the farmers in getting rented farm machinery and implements through CHC in their area.** This app will provide a platform for sell and purchase of old agriculture machinery to farmers also. **Hence option (c) is the correct answer.**

Q 85.C

- Periodic Labour Force Survey 2019-20 shows that formal vocational/technical training among youth (age 15-29 years) and working population (age 15-59 years) have improved in 2019-20 over 2018-19. The improvement in skills has also been for males and females, both in rural and urban sectors. **Hence statement 1 is correct.**
- The new National Education Policy (NEP) 2020 is set to replace the existing National Policy on Education which was first formulated in 1986 and last modified in 1992. At least 50 percent of school learners get exposure to vocational education by 2025 is one of the targets under national education policy. **Hence statement 2 is correct.**
- Jan Shikshan Sansthan (JSS) Scheme: JSS aims to provide vocational skills to non-literate, neo-literates, persons with a rudimentary level of education up to 8th and school dropouts up to 12th standard in the age group of 15-45 years.
- Pradhan Mantri Kaushal Vikas Yojana (PMKVY) was launched under Skill India Mission of 2015. PMKVY has two training components, viz., Short Term Training (STT) and Recognition of Prior Learning (RPL). PMKVY also provided training to Shramiks (migrant laborers) affected by COVID-19.

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Q 86.C

- **Gujarat International Finance Tech-city (GIFT) SEZ is India's first International Financial Services Centre (IFSC) under Special Economic Zone Act, 2005** ("SEZ Act 2005"). It is being developed as a global financial services hub. GIFT IFSC is a Multi-Services Special Economic Zone with 105 hectares of land and commenced its business in April 2015. **Hence, statement 1 is correct.**
- It provides the very competitive cost of operations with a very competitive tax regime, single-window clearance, relaxed company law provisions, international arbitration centre with overall facilitation of doing business.
- **Recently, in the Union Budget 2022-23, world-class foreign universities and institutions would be allowed to set up shop in Gift City, teaching courses** in financial management, fintech, science, technology, engineering, and mathematics, largely free from domestic regulations. **Hence, statement 2 is not correct.**

Tax incentives to IFSC proposed in the Union Budget 2022-23

- **Subject to specified conditions, the following are to be exempt from tax.**
- Income of a non-resident from offshore derivative instruments.
- Income from over-the-counter derivatives issued by an offshore banking unit.
- Income from royalty and interest on account of the lease of a ship.
- **Income received from portfolio management services in IFSC. Hence, statement 3 is correct.**

Q 87.D

- In the wake of the pandemic, the additional expenditure requirements led to YoY growth of more than 30 per cent in the revenue expenditure of the Government in 2020-21 PA.
- Expenditures on salaries, pensions and interest payments are, by and large, committed in nature and have limited headroom for the creation of additional fiscal space.
- The decline in salaries during 2020-21 PA was largely due to freezing of the additional instalment of Dearness Allowance to Government employees and disruptions in hiring.
- Nearly 60 per cent of the increase in revenue expenditure during 2020-21 PA was due to an increase in major subsidies. **The major subsidies registered a growth of over 200 per cent in 2020-21 PA over 2019-20.**
    - This increase was driven by almost 400 per cent growth in food subsidies from ` 1.09 lakh crore in 2019-20 to ` 5.25 lakh crore in 2020-21 PA. The steep rise in the food subsidy bill was on account of Pradhan Mantri Garib Kalyan Ann Yojana introduced as part of the Economic Response to COVID-19 and the pre-payment of around 1.5 lakh crore of outstanding food subsidy related loans of the Food Corporation of India.

Table 5: Major Items of Revenue Expenditure

Items	2016-17	2017-18	2018-19	2019-20	2020-21 PA	2021-22 BE
						(in ₹ lakh crore)
Revenue Expenditure of which	16.91	18.79	20.07	23.51	30.86	29.29
	(9.9)	(11.1)	(6.8)	(17.1)	(31.3)	(-5.1)
a. Salaries (pay & allowances)	1.77	1.94	2.11	2.28	2.05	2.52
	(22.6)	(9.3)	(9.0)	(7.8)	(-10.0)	(22.9)
b. Pensions	1.31	1.46	1.60	1.84	2.09	1.90
	(35.8)	(10.9)	(9.9)	(14.8)	(13.7)	(-9.0)
c. Interest payment	4.81	5.29	5.83	6.12	6.82	8.10
	(8.8)	(10.0)	(10.2)	(5.0)	(11.4)	(18.7)
d. Major subsidies	2.04	1.91	1.97	2.28	6.90	3.35
	(-15.6)	(-6.3)	(2.9)	(16.0)	(202.0)	(-51.4)
e. Defence Services	1.65	1.86	1.96	2.08	2.06	2.12
	(13.3)	(12.5)	(5.1)	(6.1)	(-0.9)	(3.1)

Source: Union Budget Documents & CGA
BE: Budget Estimate, PA: Provisional Actuals
Numbers in parenthesis are growth rates
*The figure for Salaries (Pay & allowances) for 2020-21 is Revised Estimate (RE).

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- From the above table, it is clear that during 2020-21, Revenue expenditure on major subsidies has surpassed the expenditure on interest payments. **Hence, option (d) is correct.**

Q 88.A

- During the year, a major challenge in the aftermath of the COVID-19 pandemic was the management of debt, both for the Central and State Governments.
- Total liabilities of the Central Government, as a ratio of GDP, which was relatively stable over the past decade have risen sharply in 2020-21. This increase is on account of higher borrowing resorted to due to the COVID-19 pandemic as well as a sharp contraction in the GDP. The Debt-GDP is however expected to follow a downward trajectory in the upcoming years. **Hence, statement 1 is correct.**
- **The public debt portfolio exhibits low currency and interest rate risk owing to low reliance on external borrowing** and issuance of the majority of securities at fixed coupons. Further, most of the external borrowing is from official sources which are long term and concessional in nature. The roll over risk is also low owing to the low issuance of short-term bonds with a view to elongate the maturity profile.
- Public debt is further classified into internal and external debt. Internal debt consists of marketable debt and non-marketable debt.
    - Marketable debt comprises of Government dated securities and Treasury Bills, issued through auctions.
    - Non-marketable debt comprises of intermediate Treasury Bills (14-day ITBs) issued to State Governments/ UT of Puducherry and select Central Banks, special securities issued against small savings, special securities issued to public sector banks/ EXIM Bank, securities issued to international financial institutions, and compensation and other bonds.
    - **The share of Non- marketable securities in internal debt stood at 18.2 per cent in FY 20219-20. Hence, statement 2 is not correct.**

Table 6: Debt Position of the Central Government (in ₹ lakh crore)

Components	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21 PA
1	2	3	4	5	6	7	8
A. Public Debt (A1+A2)	51.05	57.11	61.50	68.45	75.49	85.65	105.24
A1. Internal Debt (a+b)	47.38	53.05	57.42	64.01	70.75	80.20	99.09
a. Marketable Securities	43.08	47.28	50.49	55.10	59.69	65.60	78.60
b. Non-marketable Securities	4.29	5.77	6.93	8.91	11.06	14.60	20.50
A2. External Debt	3.66	4.07	4.08	4.45	4.74	5.44	6.15
B. Public Account - Other Liabilities	7.62	8.16	8.57	9.15	9.96	13.70	12.74
C. Extra-Budgetary Resources (EBRs)	-	-	0.09	0.24	0.99	1.12	1.43
D. Total Liabilities (A+B+C)	58.66	65.27	70.16	77.85	86.35	99.91	117.04

Q 89.C

- Worker Population Ratio (WPR) is defined as the percentage of employed persons in the population. WPR is an indicator used for analysing the employment situation in the country. This is also useful in knowing the proportion of the population that is actively contributing to the production of goods and services in the economy. **Hence statement 1 is correct.**
- Employees Provident Fund Organisation (EPFO) assess the formalisation of the job market with the number of EPF subscribers. The net addition in EPFO subscriptions is an indicator of the extent of formalisation of the job market, and the coverage of social security benefits to the organized/ semi-organized sector workforce. Broadly, the EPFO data covers the low-paid workers in medium and large establishments of formal sector an analysis of the latest EPFO data suggests significant acceleration informalization of the job market, driven by both new formal jobs and formalization of existing jobs, during 2021. The monthly net addition in subscriptions during 2021 has not only been higher than the corresponding monthly values in 2020, but they have also surpassed the levels of the corresponding months during pre-pandemic year 2019. **Hence statement 2 is not correct.**
- Unemployment rate is defined as the percentage of persons unemployed among the persons in the labour force. **Hence statement 3 is correct.**

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- Periodic labour Force Participation showed that there is a rise in workforce engaged in agriculture: Share of the workforce engaged in agriculture has risen to 45.6 per cent (2019-20) from 42.5 per cent (2018-19). **Hence statement 4 is not correct.**

Q 90.C

- **Recent Context: IIT-Guwahati scientists have created a polyelectrolyte (polymer with a positive or negative charge) to increase the stability of the perovskite films used in the hybrid perovskite-based solar or photovoltaic devices.**
  - Perovskite Solar Cell (PSC) includes a perovskite-structured compound, most commonly a hybrid organic-inorganic lead or tin halide-based material, as the light-harvesting active layer.
  - **Perovskite-based devices are considered heavily used semiconductor materials as they are affordable and easy to manufacture. Hence, statement 1 is correct.**
  - Developing large-scale perovskite solar cells requires high-quality defect-free perovskite films with improved surface coverage.
  - But, **perovskite materials are extremely unstable towards ambient (humidity and oxygen) conditions that restrict their commercialization.**
  - **Stabilization** - The most convenient way **to harness the maximum potential of the perovskite active layer is to use a coating of appropriate passivation material.**
  - This will make the perovskite active layer 'stable' or less readily affected by the environment, in this case, humidity and oxygen.
  - **Perovskite-based solar cells can be manufactured at room temperature, making them cost-effective and more eco-friendly. Hence, statement 2 is correct.**
  - As all components used in the hybrid perovskite-based solar cells are recyclable, they will help reduce the growing problem of Waste Electrical and Electronic Equipment (WEEE).
  - An International Renewable Energy Agency (IRENA) report estimated the global PV waste will touch 78 million tonnes by 2050, with India being one of the top five PV waste creators.

Q 91.B

- Factoring is an important source of liquidity worldwide, especially for Ministry of Micro, Small & Medium Enterprises (MSMEs).
- **Factoring is a transaction where an entity sells its receivables (dues from a customer) to a third party (a 'factor' like a bank or NBFC) for immediate funds. Hence option (b) is the correct answer.**
- All or part of invoice can be sold to a factor for getting money immediately at competitive interest rate.
- The factor then collects payments from the buyer of goods and earns a commission in the form of some interest.

Q 92.D

- Atal Pension Yojana (APY) is a government-backed pension scheme primarily targeted atthe unorganised sector . It is open to all bank account holders in the age group of 18 to 40years. It is administered by Pension Fund Regulatory and Development Authority (PFRDA).
- The total number of subscribers under New Pension Scheme (NPS) and Atal Pension Yojana (APY) increased from 374.32 lakh as on September 2020 to 463 lakh as on September 2021, recording a growth of 23.7 per cent over the year.
- The age profile of the subscribers in the APY scheme suggests increasing enrolments at younger age.
- **As on September 2021, more than 43 per cent subscribers were between 18 and 25 years, as compared to 29 per cent as on March 2016. Hence statement 1 is not correct.**
- Further, more people are now opting for a pension amount of `1000 per month.
- As on September 2021, around 78 per centsubscribers have opted for `1000 per month pension amount, as compared to 38 per cent subscribers as on March 2016.
- The gender gap in enrolments under APY has narrowed down with increased participation of female subscribers, which has **increased from 37 per cent as of March 2016 to 44 per cent as of September 2021. Hence statement 2 is not correct.**

Q 93.B

- Credit growth (Year on Year) from NBFCs has not been consistently decreasing. **Hence statement 1 is not correct.**
- It has shown variation between 2013 and 2021.
- The credit intensity of NBFCs, measured by NBFC credit as a ratio of GDP has been rising consistently and stood at 13.7 at the end of March 2021.

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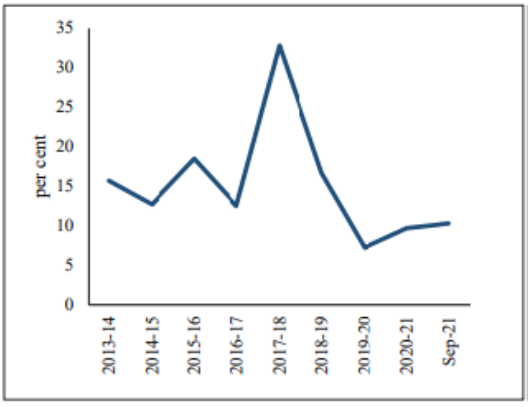
- **The NBFC credit as a ratio of GDP has increased between 2013 and 2021. Hence statement 2 is correct.**

Figure 15: Credit growth (YoY) from NBFCs



Source: RBI
Note: Data for September 2021 pertains only to Deposit taking NBFC and non-deposit taking systemically important NBFCs based on offsite returns data

Figure 16: NBFC's Credit to GDP Ratio

Source: Trends and Progress of Banking in India, RBI
Note: Data is at end- March; GDP data used is GDP at current market prices (base:2011-12

Q 94.B

- Border villages with a sparse population, limited connectivity and infrastructure often getleft out from development gains. The Vibrant Village Programme, a government scheme announced in the budget proposals to improve social and financial infrastructure in remote habitations on the northern border, primarily **along the border with China**, will be an improved version of the existing border area development programme. **Hence, statement 1 is not correct.**
- The finance minister stated that border villages with a sparse population, limited connectivity and infrastructure often get left out from development gains. Now, under a Vibrant Villages programme, "such villages on the northern border will be covered", and activities will include "construction of village infrastructure, housing, tourist centres, road connectivity, **provisioning of decentralised renewable energy, direct-to-home access for Doordarshan and educational channels, and support for livelihood generation"**. **Hence, statement 2 is correct.**
- The scheme would have twin objectives of strengthening infrastructure along the border and ensuring that residents don't abandon their villages in search of economic opportunities in other areas.

Q 95.A

- During Periodic Labour Force Survey (PLFS) 2019-20 employment status continued to expand. Between 2018-19 and 2019-20, about 4.75 crore additional persons joined the workforce.
  - This is about three times more than the employment created between 2017-18 and 2018-19. The rural sector contributed much more to this expansion relative to the urban sector (3.45 crore in the rural sector and 1.30 crore in the urban sector). **Hence statement 2 is correct.**
- Amongst the additional workers, 2.99 crores were females (63 percent). About 65 percent of the additional workers joined in 2019-20 were self-employed. **Hence statement 1 is correct.**
- During the period of 2019-20, 14.77 cr. people employed in the agriculture sector and 5.42 cr. people are in the construction sector. **Hence statement 3 is not correct.**

Q 96.D

- Taking advantage of the increased demand for staples during the COVID-19 pandemic, India's agricultural exports continue to do well in 2021-22, backed by an effective agriculture export policy. The export of agriculture and allied products (including marine and plantation products) grew by 23.2 per cent to US$ 31.0 billion during April-November, 2021 over the corresponding period of 2020-21 and by 35.0 per cent over April-November, 2019, surpassing the pre-pandemic levels
- The list of top 10 agricultural export commodities during 2021-22 (April-November) include

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Table 1: Top 10 Agricultural Export Products

(US$ Billion)

Rank	Commodity	2019-20	2020-21	2020-21 (Apr-Nov)	2021-22 (Apr-Nov) (P)
1	Marine Products	6.7	6.0	4.0	5.4
2	Rice(Other Than Basmoti)	2.0	4.8	2.7	3.9
3	Spices	3.6	4.0	2.6	2.7
4	Sugar	2.0	2.8	1.6	2.3
5	Buffalo Meat	3.2	3.2	2.1	2.2
6	Rice -Basmoti	4.4	4.0	2.7	2.1
7	Cotton Raw Incld. Waste	1.1	1.9	0.8	1.5
8	Wheat	0.1	0.6	0.2	1.2
9	Castor Oil	0.9	0.9	0.6	0.8
10	Misc Processed Items	0.6	0.9	0.5	0.7
	Total Agricultural Exports	35.6	41.9	25.2	31.0

- About 54% or more than half the **agri-imports by India is of vegetable oils.** India's vegetable oil imports in 2020-21, up to February 2021, are worth Rs. 74,286 crores. **Other major agri-imports are fresh fruits, pulses, spices, and cashew.**
- **Hence, option (d) is the correct answer.**

Q 97.D

- **The SDG India Index** computes goal-wise scores on the 16 SDGs for each State and Union Territory. Overall State and UT scores are generated from goal-wise scores to measure the aggregate performance of the sub-national unit based on its performance across the **16 SDGs.** These scores range between 0–100, and if a State/UT achieves a score of 100, it signifies it has achieved the 2030 targets. **The higher the score of a State/UT, the greater the distance to target achieved. Hence statement 1 is correct.**
- **NITI Aayog has the mandate** for coordinating the adoption and monitoring of SDGs at the national and sub-national levels. The SDG India Index and Dashboard represent NITI Aayog's efforts in encouraging evidence-based policymaking by supporting States and UTs to benchmark their progress, identify the priority areas and share good practices. **NITI Aayog has been publishing the SDG India Index annually since 2018. Hence statement 2 is correct.**
- India's overall score on the **NITI Aayog SDG India Index & Dashboard improved to 66 in 2020-21 from 60 in 2019-20 and 57 in 2018-19,** showing progress in India's journey towards achieving the SDGs. Despite 2020-21 being a pandemic year, India performed well on eight of the 15 SDGs measured by the NITI Aayog SDG India Index. **Hence statement 3 is correct.**
- **Hence option (d) is the correct answer.**

Q 98.B

- **Recent Context:** The international team of scientists examined a section of the highly-shocked meteorite from Katol. T**he paper published this month in Proceedings of the National Academy of Sciences (PNAS) reports the first natural occurrence of a mineral called bridgmanite. The mineral was named in 2014 after Prof. Percy W. Bridgman, recipient of the 1946 Nobel Prize in Physics.**
  - By studying a mineral named bridgmanite, researchers have suspected that Earth's inner heat is dissipating sooner, making it cool faster than expected.
  - Bridgmanite is the **most volumetrically abundant mineral commonly found between Earth's core and mantle.**
  - Also known as Silicate perovskite, it **makes up 70% of the lower mantle.**
  - Bridgmanite **consists of magnesium, iron, calcium aluminium oxide and has a perovskite structure.**
- **Hence option (b) is the correct answer.**

Q 99.D

- **Recent Context:** Union Budget 2022-23 stated that Startups will be promoted to facilitate 'Drone Shakti' through variedapplications and for Drone-As-A-Service (DrAAS). In select ITIs, in all states, the required courses for skilling will be started.

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- Unmanned Aircraft Systems (UAS), commonly known as drones, offer tremendous benefits to almost all sectors of the economy like – agriculture, mining, infrastructure, surveillance, emergency response, transportation, geo-spatial mapping, defence, law enforcement etc. India has the potential to be a global drone hub by 2030.
- **Ministry of Civil Aviation (MoCA) published liberalised Drone Rules, 2021. Key features of the Drone Rules 2021 are:**
    - The digital sky platform shall be developed as a user-friendly single-window system. There will be minimal human interface and most permissions will be self-generated.
    - **No permission is required for operating drones in green zones.** Green zone means the airspace up to a vertical distance of 400 feet or 120 metres that has not been designated as a red zone or yellow zone in the airspace map; and the airspace up to a vertical distance of 200 feet or 60 metres above the area located between a lateral distance of 8 and 12 kilometres from the perimeter of an operational airport. **Hence, Option (c) is correct.**
    - **No remote pilot licence is required for micro drones (for non-commercial use) and nano drones. Hence, Option (d) is not correct**.
    - No requirement for security clearance before issuance of any registration or licence.
    - No requirement of Type Certificate, unique identification number and remote pilot licence by R&D entities operating drones in own or rented premises, located in a green zone.
    - **No restriction on foreign ownership in Indian drone companies. Hence, Option (a) is correct.**
    - Requirement of import clearance from DGCA abolished.
    - **Coverage of drones under Drone Rules, 2021 increased from 300 kg to 500 kg. This will cover drone taxis also. Hence, Option (b) is correct.**
    - DGCA shall prescribe drone training requirements, oversee drone schools and provide pilot licences online.
    - Drone promotion council to be set up by Government with participation from academia, startups and other stakeholders to facilitate a growth-oriented regulatory regime.

Q 100.C

- The rise in exports is contributed by high growth in petroleum, oil and lubricants (POL) exports (constituting about 15 per cent of total exports) as well as non-POL exports, indicating the broad-based nature of expansion.
- Owing to rise in global crude oil prices, petroleum products continued to be the most exported commodity in April-November 2021, whose exports have more than doubled and their share rose to 14.9 percent from 8.8 per cent in corresponding period a year earlier.
- Exports of pearls, precious, semi-precious stones and gold & other precious metal jewellery have shown substantial growth of 88 per cent in April-November, 2021 compared to last year owing to various measures undertaken by Government such as reduction in import duty of precious metals, resolution of procedural issues to enhance ease of doing business along with revival in demand in major export markets.
- **The exports of aluminium and its products is a newly added commodity in the list of top ten exported commodities during April-November, 2021. Hence, option (c) is correct.**

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